

EOG Resources, Inc. 1540 Belco Drive Big Piney, WY 83113-0250 P.O. Box 250 Big Piney, WY 83113-0250 (307) 276-3331

October 27, 2005

Bureau of Land Management Vernal Field Office 170 South 500 East Vernal, Utah 84078

**RE: APD - Submittals** 

To Whom It May Concern:

Attached please find Applications for Permit to Drill for the following wells:

Nutters Canyon 1-2 √
Road Hollow 1-35
Quitchampau 1-15
Gilsonite 1-20

If you require additional information, please contact me at (307) 276-4842.

Sincerely,

Kaylene Gardner Regulatory Assistant

krg

cc: D

Denver file

RECEIVED 7 OCT 3 1 2005

DIV. OF OIL, GAS & MINING

FORM APPROVED Form 3160-3 OMB No. 1004-0137 Expires March 31, 2007 (February 2005) UNITED STATES Lease Serial No. DEPARTMENT OF THE INTERIOR UTU-78242 BUREAU OF LAND MANAGEMENT 6. If Indian, Allotee or Tribe Name APPLICATION FOR PERMIT TO DRILL OR REENTER 7 If Unit or CA Agreement, Name and No. DRILL la. Type of work: REENTER 8. Lease Name and Well No. Oil Well 🗸 Gas Well ✓ Multiple Zone Single Zone lb. Type of Well: **NUTTERS CANYON 1-2** 9. API Well No. Name of Operator EOG RESOURCES, INC. 43-013-3 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory 3a. Address 600 17th STREET, SUITE 1100N **DENVER, CO 80202 EXPLORATORY** 307-276-4842 11. Sec., T. R. M. or Blk, and Survey or Area Location of Well (Report location clearly and in accordance with any State requirements.\*) 579' FNL, 669' FWL (NW/NW) 549458 X At surface -110.42139 SEC. 2, T7S, R5W, U.S.B.&M. 44174524 At proposed prod. zone SAME AS ABOVE 12. County or Parish 13. State 14. Distance in miles and direction from nearest town or post office\* 36.2 MILES SOUTHWEST OF MYTON, UTAH DUCHESNE UT 17. Spacing Unit dedicated to this well Distance from proposed 16. No. of acres in lease LEASE/DRLG UNIT location to nearest property or lease line, ft. 579 FT/579 FT 2,376 40 ACRES (Also to nearest drig. unit line, if any) 19. Proposed Depth 20. BLM/BIA Bond No. on file 18. Distance from proposed location\* to nearest well, drilling, completed, SEE TOPO MAP "C" 13,400 FT NM-2308 applied for, on this lease, ft. 22. Approximate date work will start\* Elevations (Show whether DF, KDB, RT, GL, etc.) 23. Estimated duration 8553.6 FT GRADED GROUND 08/01/2006 45 DAYS 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form: 1. Well plat certified by a registered surveyor. Item 20 above). 2. A Drilling Plan. Operator certification 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). Such other site specific information and/or plans as may be required by the

Bond to cover the operations unless covered by an existing bond on file (see

| 25. Signature              | Name (Printed/Typed)        | Date       |
|----------------------------|-----------------------------|------------|
| - Jaly Baulun              | KAYLENE GARDNER             | 10/27/2005 |
| Title REGULATORY ASSISTANT |                             |            |
| RECOLLITION ASSISTANT      |                             |            |
| Approved by Signature      | Name (Printed/Typed)        | Date       |
| Trolly (                   | BRADLEY G. HILL             | 111-01-05  |
| Title                      | ENV ROOMENTAL SCIENTIST III |            |
|                            |                             | •          |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

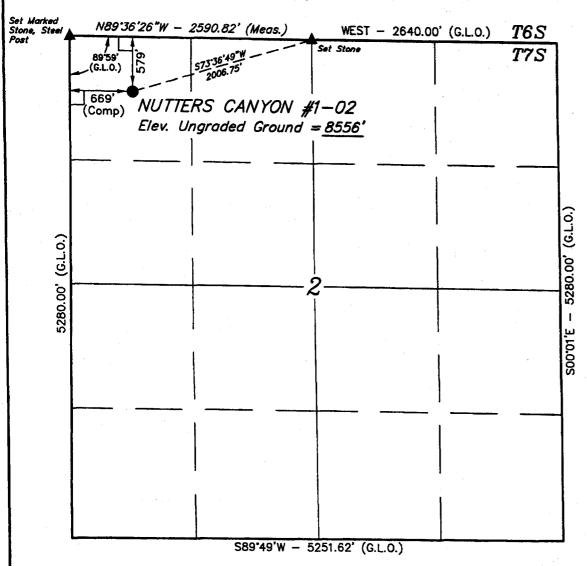
\*(Instructions on page 2)

Federal Approval of this

Action is Necessary RECEIVED OCT 3 1 2005

DIV. OF OIL. GAS & MINING

### T7S, R5W, U.S.B.&M.



#### BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

#### LEGEND:

\_\_ = 90' SYMBOL

= PROPOSED WELL HEAD.

= SECTION CORNERS LOCATED.

(AUTONOMOUS NAD 83)

LATITUDE = 39°54'27.63" (39.907675)

LONGITUDE = 110°25.19.63" (110.422119)

(AUTONOMOUS NAD 27)

LATITUDE = 39°54'27.76" (39.907711)

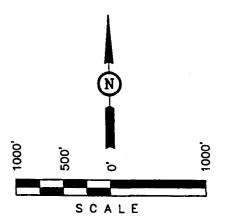
LONGITUDE = 110°25'17.07" (110.421408)

#### EOG RESOURCES, INC.

Well location, NUTTERS CANYON #1-02, located as shown in the NW 1/4 NW 1/4 of Section 2, T7S, R5W, U.S.B.&M. Duchesne County, Utah.

#### BASIS OF ELEVATION

BOUNDARY (1966) TRIANGULATION STATION LOCATED IN THE SW 1/4 OF SECTION 10, T7S, R5W, U.S.B.&M. TAKEN FROM THE ANTHRO MOUNTAIN, QUADRANGLE, UTAH, DUCHESNE COUNTY 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 9011 FEET.



CERTIFICATE

REGISTERED LAND SURVEYORS
REGISTRATION NO. 151319

### UINTAH ENGINEERING & LAND SURVEYING 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017

| SCALE<br>1" = 1000' |      |      | DATE SURVEYED:<br>5-6-05 | DATE DRAWN:<br>5-27-05 |
|---------------------|------|------|--------------------------|------------------------|
| PARTY<br>J.F.       | D.L. | K.G. | REFERENCES<br>G.L.O. PLA | AT .                   |
| WEATHER<br>COOL     |      |      | FILE<br>EOG RESOU        | RCES, INC.             |

#### 1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS, & WATER ZONES:

| FORMATION              | DEPTH (KB) | <b>OBJECTIVE</b> |
|------------------------|------------|------------------|
| Green River            | 320'       |                  |
| Wasatch                | 4,320'     |                  |
| Dark Canyon            | 8,984'     |                  |
| KMV Price River        | 9,366'     |                  |
| KMV Price River Middle | 10,113'    |                  |
| Bluecastle             | 10,683     |                  |
| KMV Price River Lower  | 11,106'    | GAS              |
| Pressure Top           | 11,107'    |                  |
| KMV Castlegate         | 11,583'    | GAS              |
| KMV Blackhawk          | 11,970'    | GAS              |
| Sunnyside              | 12,473'    | GAS              |
| Kenilworth             | 12,799'    | GAS              |
| Aberdeen               | 12,983     | GAS              |

EST. TD: 13,400' or 200' ± below Aberdeen top

**Anticipated BHP 7600 PSI** 

Fresh water zones may exist anywhere in the upper 4000' of the well. All such zones will be isolated by cement to surface.

3. PRESSURE CONTROL EQUIPMENT:

Production Hole – 11", 5000 PSI BOPE

BOP Schematic diagrams attached.

Intermediate Hole:

13 5/8" 5000 psi annular or

13 5/8" rotating head to be used as a diverter

#### 4. CASING PROGRAM:

|              |             | <del></del>                       |               |         |               |              |             | RA'       | <u>rings</u>     |          |
|--------------|-------------|-----------------------------------|---------------|---------|---------------|--------------|-------------|-----------|------------------|----------|
| <b>HOLE</b>  | <u>SIZE</u> | INTERVAL                          | <b>LENGTH</b> | SIZE    | <b>WEIGHT</b> | <u>GRADE</u> | <b>CONN</b> | COLL. PSI | <b>BURST PSI</b> | TENS PSI |
| Surface:     | 17 1/2"     | 0' - 250'± KB                     | 250' ±        | 13 3/8" | 48.0 #        | H-40         | ST&C        | 740 PSI   | 1730 PSI         | 322,000# |
| Intermediate | e 12 1/4"   | 250' - 3400'± KB                  | 3400' ±       | 9 5/8"  | 36.0#         | J-55         | ST&C        | 2020 PSI  | 3570 PSI         | 394,000# |
| Production:  | 7 7/8"      | $3400'-\mathrm{TD}\pm\mathrm{KB}$ | 13,400° ±     | 4 1/2"  | 11.6#         | HC P-110     | LT&C        | 8650 PSI  | 10,690 PSI       | 279,000# |

Note: 12-1/4" surface hole will be drilled to a total depth of 200'± below the base of the Green River lost circulation zone and cased with 9-5/8" as shown to that depth. Drilled depth may be shallower or deeper than the 3400' shown above depending on the actual depth of the loss zone.

#### All casing will be new or inspected.

#### 5. Float Equipment:

#### Surface Hole Procedure (0-250' Below GL):

Guide Shoe

Wooden wiper plug

Centralizers: 1-5-10' above shoe, every collar for next 3 joints (4 total).

#### Intermediate Hole Procedure (250'-3400'):

Guide Shoe

Insert Float Collar (PDC drillable)

Cents.: 1-5' above shoe, top of jts. #2 and #3 then every 5<sup>th</sup> joint to surface.

#### **Production Hole Procedure (3400'-TD):**

FS, 1 joint of casing, FC, and balance of casing to surface. Centralize 5' above shoe on joint #1, top of joint #2, then every 2nd joint to 400' above top of shallowest potentially-productive zone. Thread lock FS, top and bottom of FC, and top of 2<sup>nd</sup> joint.

#### 6. MUD PROGRAM

#### Surface Hole Procedure (0-250' below GL):

Air/air mist or aerated water.

#### Intermediate Hole Procedure (250'-3400'):

Water (circulate through reserve pit) with Gel/LCM sweeps.

#### **Production Hole Procedure (3400'-TD):**

3400'- 9'000': Reserve pit water. Circulate through reserve pit with Gel/LCM and PHPA sweeps as needed.

9000'-TD: Weighted LSND, 9-11 PPG, 9-10 pH, less than 20 cc's water loss. Run LCM sweeps periodically to seal off loss zones or more often as hole dictates. Expect increasing gas shows requiring heavier mud weights from the top of the Price River onward. Treat CO2 contamination with DESCO CF if mud properties dictate.

#### 7. VARIANCE REQUESTS:

#### Reference: Onshore Oil and Gas Order No. 2 – Item E: Special Drilling Operations

While drilling surface hole, EOG Resources, Inc. requests a variance to regulations requiring the blooie line to be 100' in length.

To reduce location excavation, the blooie line will be 75' in length.

#### 8. EVALUATION PROGRAM:

Logs:

Mud log from base of surface casing to TD.

Schlumberger Platform Express with Di-pole Sonic from TD to base of surface casing in 1 run. Rotary sidewall cores as needed and based upon results from first log run.

#### 9. CEMENT PROGRAM:

#### Surface Hole Procedure (0-250' Below GL)

Lead: 300 sx. (100% excess volume) Class 'G' cement with 2% S1 (CaCl2) & 0.25 pps D29 (cellophane flakes), mixed at 15.8 ppg, 1.15 cu. ft./sk., 4.95 gps water.

**Top Out:** Top out with Class 'G' cement with 2% S1 (CaCl2) in mix water, 15.8 ppg, 1.15 cu. ft./sk., 4.95 gps via 1" tubing set at 25' if needed.

#### Intermediate Hole Procedure (250'-3,400')

Lead: 260 sx. (50% excess volume) Class 'G' lead cement (coverage from 2400'-250') with 5% D44 (Salt), 12% D20 (Bentonite), 1% D79% (Extender), 0.25% D112 (Fluid Loss Additive), 0.2% D46 (Anti-Foamer) & 0.25 pps D29 (Cellophane flakes) mixed at 11.0 ppg, 3.91 ft3/sk., 24.5 gps water.

**Tail:** 290 sx. (50% excess volume) Class 'G' cement (coverage from 3400'-2400') with 10% D53 (Gypsum), 2% S1 (CaCl2) & 0.25 pps D29 (Cellophane flakes) mixed at 14.2 ppg, 1.61 ft3/sk., 7.9 gps water.

If openhole logs are run in intermediate hole, cement volumes will be based on openhole log caliper volume plus 10% excess.

#### Production Hole Procedure (3400' to TD)

**Lead:** 730 sx Hi-Lift G (coverage from 400' above top productive interval to 3200' (± 200' into intermediate casing)) w/ 12% D20 (Bentonite), 1% D79 (Extender), 0.2% D46 (Antifoamer), 0.2% D167 (Fluid Loss Additive), 0.2 % D13 (Retarder), 0.25 pps D29 (cellophane flakes), mixed at 11.5 ppg, 3.05 cu. ft./sk., 18.65 gps water.

Middle: 300 sx 50:50 Poz:G (coverage from 12000' to 400' above top productive interval) w/ 2% D20 (Bentonite), 0.1% D46 (Antifoamer), 0.15% D13 (Retarder), 0.2% D167 (Fluid Loss Additive), 0.2% D65 (Dispersant), mixed at 14.0 ppg, 1.29 cu. ft./sk., 5.9 gps water..

#### **Production Hole Procedure (Continued):**

**Tail:** 270 sx 50:50 Poz:G (coverage from TD-12000') w/ 2% D20 (Bentonite), 35.0% D-66 (Silica), 0.1% D46 (Antifoamer), 0.075% D800 (Retarder), 0.2% D167 (Fluid Loss Additive), 0.2% D65 (Dispersant), mixed at 14.1 ppg, 1.53 cu. ft./sk., 7.0 gps water.

Note: Production string cement volumes shown are based on gauge hole +30% excess and assuming a top productive zone at 10,700'. Actual volumes will be based upon open hole caliper log volume plus 5% excess and top of tail cement to 400' above the highest indicated productive interval. Tail cement composition will be adjusted as needed for bottom hole temperature indicated on open hole logging tools.

#### 10. ABNORMAL CONDITIONS:

#### **INTERMEDIATE HOLE (250'-3400')**

**Potential Problems:** Lost circulation throughout the section and minor amounts of gas may be present. Hydrocarbon shows and/or water zones will be monitored for and reported.

#### **PRODUCTION HOLE (3400'-TD)**

**Potential Problems:** Research indicates that mud losses are possible throughout all of the 7-7/8" hole. Sloughing shales and keyseat development are possible in the Wasatch Formation. CO2 contamination in the mud is possible in the Price River (Mesaverde).

#### 11. STANDARD REQUIRED EQUIPMENT:

- A. Choke Manifold
- B. Upper and Lower Kelly Cock
- C. Stabbing Valve
- D. Electronic/mechanical Mud monitoring equipment (PVT)

#### 12. HAZARDOUS CHEMICALS:

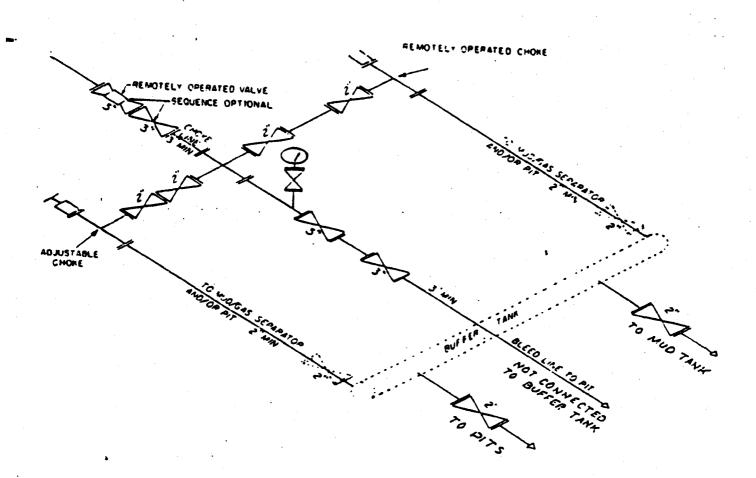
No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

(Attachment: BOP Schematic Diagram)

### **5000 PSIG BOPE DIAGRAM**

ANNULAR PREVENTOR AND BOTH RAMS ARE 5000 PSIG RATED. CASING FLANGE IS 11" 5000 PSIG RATED. **FLOWLINE ANNULAR PREVENTOR CHOKE MANIFOLD** 2" MIN ADJUSTABLE CHOKE **BLIND RAMS** TO MUD/GAS SEPARATOR OR PIT 3" MINIMUM RATED TO 5000 PSIG PIPE RAMS 3" MIN 2" KILL LINE **BLEED LINE PIT** REMOTELY OPERATED VALVE CHECK 3" DIAMETER SPOOL, 11", 5000 PSIG ; KILL LINE RATING **CASING FLANGE** 2" MIN TO MUD/GAS SEPARATOR OR PIT REMOTE OPERATED CHOKE

### CHOKE MANIFOLD



#### CONDITIONS OF APPROVAL FOR THE SURFACE USE PROGRAM OF THE APPLICATION FOR PERMIT TO DRILL

Company/Operator:

EOG Resources, Inc.

Well Name & Number:

Nutters Canyon 1-2

Lease Number:

UTU-78242

Location:

579' FNL & 669' FWL, NW/NW, Sec. 2,

T7S, R5W, U.S.B.&M., Duchesne County, Utah

Surface Ownership:

Federal

#### **NOTIFICATION REQUIREMENTS**

**Location Construction:** 

Forty-eight (48) hours prior to construction of location and

access roads.

Location Completion:

Prior to moving on the drilling rig.

Spud Notice:

At least twenty-four (24) hours prior to spudding the well.

Casing String and

Cementing:

Twenty-four (24) hours prior to running casing and cementing

all casing strings.

BOP and related

**Equipment Tests:** 

Twenty-four (24) hours prior to running casing and tests.

First Production Notice: Within five (5) business days after new well begins or

production resumes after well has been off production for more

than ninety (90) days.

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

#### THIRTEEN POINT SURFACE USE PROGRAM

The well pad is approximately 325 feet long with a 246-foot width, containing 1.84 acres more or less. The well access road is approximately 130 feet long with a 30foot right-of-way, disturbing approximately 0.09 acre. New surface disturbance associated with access road and the well pad is estimated to be approximately 1.93 acres. No pipelines or surface facilities are proposed. See attached plats and TOPO maps.

#### 1. EXISTING ROADS

- A. See attached Wellsite Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing roads.
- B. The proposed well site is located approximately 36.22 miles southwest of Myton, Utah See attached TOPO Map "A."
- C. Refer to attached Topographic Map "A" showing labeled access route to location.
- D. An existing road approximately 2.7 miles long will connect the ridge road to the northwest of Nutters Canyon to the planned access road. See attached TOPO Map "B."
- E. Approximately 0.7 miles of the existing road may be upgraded to meet the standards of the anticipated traffic flow and all-weather road requirements. The existing road will be upgraded to the minimum degree needed. Upgrading may include ditching, drainage, graveling, crowning, and capping the roadbed as necessary to provide a well-constructed safe road; however, because this well is an exploratory well, improvements to the access road will consist of the minimum construction needed for safe travel. Prior to any upgrading, the road will be cleared of any snow cover and allowed to dry completely. Upgrading will not be allowed during muddy conditions. Should mud holes develop, they will be filled in and detours around them avoided.
- F. Existing roads will be maintained and repaired as necessary.
- G. Men and equipment will be commuting from the Vernal/Duchesne area. This well is planned to be drilled in the summer of 2006. Drilling and completion would occur over a period of approximately seven weeks.

#### 2. PLANNED ACCESS ROAD

- A. The access road will be approximately 130 feet in length. See attached TOPO Map "B."
- B. The planned access road will have a 30-foot right-of-way (ROW) with an 18-foot running surface. Traveling off the 30-foot ROW will not be allowed.
- C. Maximum grade on access road will be 8%.
- D. No turnouts will be required.

- E. No culverts, bridges, or major cuts and fills will be required.
- F. The access road will be dirt surface. The road will be constructed to meet the standards of the anticipated traffic flow and all-weather road requirements. Upgrading may include ditching, drainage, graveling, crowning, and capping the roadbed as necessary to provide a well-constructed safe road. Prior to upgrading, the road will be cleared of any snow cover and allowed to dry completely. Upgrading will not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided.
- G. No gates, cattleguards, or fences will be required. As operator, EOG Resources, Inc. will be responsible for all maintenance on cattleguards, or gates associated with this oil and/or gas operation.
- H. New or reconstructed roads were centerlined-flagged at time of location staking.
- I. Road drainage crossings will be of the typical dry creek drainage crossing type. Crossings will be designed so they will not cause siltation or accumulation of debris in the drainage crossings nor will the drainages be blocked by the roadbed.
- J. Erosion of drainage ditches by run off water will be prevented by diverting water off at frequent intervals by means of cutouts.

### 3. <u>LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS OF PROPOSED WELL LOCATION</u>

Abandoned wells - 1. See attached TOPO Map "C."

#### 4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

#### A. ON WELL PAD

- 1. The proposed location will be constructed on the former location for the plugged and abandoned ACF #1. This location has been reclaimed.
- 2. Permanent production facilities will not be set on location. This well is an exploratory well.
- 3. Gas gathering lines will not be installed.
- 4. Approximately 1.84 acres will be required for the construction of the well pad, approximately 33% of which will use the reclaimed ACF #1 well pad. If the well is determined to be dry, the entire location will be reclaimed according to USFS requirements.
- B. OFF WELL PAD: No facilities are planned off the well pad.

#### 5. LOCATION & TYPE OF WATER SUPPLY

- A. Water supply will be from the nearest approved source, possibly from the Ouray Municipal Water Plant at Ouray, Utah, and/or Target Trucking Inc.'s water source in the SW/SW, Sec. 35, T9S, R22E, Uintah County, Utah (State Water Right #49-1501). Water will be hauled by a licensed trucking company.
- B. If drilling the conductor or surface hole indicates the existence of water bearing zones, EOG Resources will consider drilling a water well on the location to provide a more viable water source. Drilling a water well would reduce truck travel to the well site. No additional disturbance will result from drilling a water well.

#### 6. SOURCE OF CONSTRUCTION MATERIAL

- A. All construction material for this location and access road will be of native borrow and soil accumulated during the construction of the location.
- B. All construction material will come from federal land.
- C. No mineral materials will be required.

#### 7. METHODS OF HANDLING WASTE DISPOSAL

#### A. METHODS AND LOCATION

- 1. Cuttings will be confined in the reserve pit.
- 2. A portable toilet will be provided for human waste during the drilling and completion of the well. Disposal will be at the Roosevelt sewage disposal plant or other approved disposal site.
- 3. Burning will not be allowed. Trash and other waste material will be contained in a wire mesh cage and disposed of at the nearest approved landfill or the Duchesne County Landfill.
- 4. All chemicals will be disposed of at an authorized disposal site. Drip pans and absorbent pads will be used on the drilling rig to avoid leakage of oil to the pit.

#### B. RESERVE PIT

- 1. Water from drilling fluids and recovered during testing operations will be disposed of by removal and transport to an authorized disposal site.
- 2. Introduction of well bore hydrocarbons to the reserve pit will be avoided by flaring them off in the flare pit at the time of recovery.
- 3. Produced wastewater will be confined to a lined pit or storage tank for a period not to exceed 90 days after initial production. After the 90-day period, the produced water will be disposed of at an authorized disposal site. The

- tank, if used, would be removed from the location as soon as practicable after the water is transported from the location.
- 4. The reserve pit will be constructed so as not to leak, break, or allow discharge. If the reserve pit requires padding prior to lining (due to rocky conditions) felt padding will be used.
- 5. The reserve pit will be lined with felt and a 12-millimeter plastic liner.

#### 8. ANCILLARY FACILITIES

No airstrips, camps, or other ancillary facilities are planned for this well.

#### 9. WELLSITE LAYOUT

- A. Refer to attached well site plat for related topography cuts and fills and cross sections.
- B. Refer to attached well site plat for rig layout and soil material stockpile location as approved on onsite.
- C. Refer to attached well site plat for rig orientation, parking areas, and access road.
- D. The approved seed mixture for this location will be as required by the USFS.
- E. The reserve pit will be located on the southwest corner of the location. The flare pit will be located downwind of the prevailing wind direction on the west side of the location, a minimum of 100 feet from the well head. The position of the flare pit will be dictated by rig configuration such that the flare pit is a safe distance from the reserve pit without requiring use of elbows or excessive bends in flare lines.
- F. The stockpiled pit topsoil will be stored separate from the location topsoil northwest of Corner #5. The stockpiled location topsoil will be stored between Corner #6 and an existing 2-track road.
- G. Access to the well pad will be from the south.
- H. FENCING REQUIREMENTS: All pits will be fenced according to the following minimum standards:
  - 1. Thirty-nine inch net wire shall be used with at least one strand of barbed wire on top of the net wire. (Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence).
  - 2. The net wire shall be no more than 2 inches above the ground. The barbed wire strand shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.

- 3. Corner posts shall be cemented and/or braced in such a manner as to keep the fence tight at all times.
- 4. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 feet.
- 5. All wire shall be stretched by using a stretching device before it is attached to the corner posts.
- 6. The reserve pit fencing will be on the three sides during drilling operations and on the fourth side when the rig moves off the location. Pits will be fenced and maintained until clean-up.
- 7. Each existing fence to be crossed by the access road shall be braced and tied off before cutting so as to prevent slacking of the wire. The opening shall be closed temporarily as necessary during construction to prevent the escape of livestock, and, upon completion of construction, the fence shall be repaired to USFS specifications. Prior to crossing any fence located on Federal land, or any fence between Federal land and private land, the operator will contact the USFS, who will in turn contact the grazing permittee or owner of said fence and offer him/her the opportunity to be present when the fence is cut in order to satisfy himself/herself that the fence is adequately braced and tied off.

#### 10. PLANS FOR RESTORATION OF SURFACE

#### A. COMPLETED LOCATION

- 1. Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, and trash not required for production.
- 2. Immediately upon well completion, any hydrocarbons on the pit will be removed in accordance with CFR 3162.7-1.
- 3. If a plastic nylon reinforced liner is used, it will be torn and perforated before backfilling of the reserve pit.
- 4. Interim reclamation will be performed on all areas of the access road and well pad not needed after drilling and completion operations (if performed) are finished.
- 5. The reserve pit will be recontoured to the approximate natural contours. The stockpiled pit topsoil will then be spread over the pit area and broadcast seeded with the prescribed seed mixture for this location. The seeded area will then be walked down with a cat.
- 6. Rat and mouse holes will be filled and compacted from bottom to top immediately after release of the drilling rig from the location.
- 7. Topsoil from the berms and/or storage piles will be spread along the road's cut and fill slopes. Drainage ditches or culverts will not be blocked with topsoil and associated organic matter. The topsoil areas will be seeded as stated below. The unused area of the pad will be recontoured and topsoil spread six inches deep. The area on the contour will be ripped one foot deep using ripper teeth set on one-foot centers.

- 8. All disturbed, unused areas will be seeded using a drill equipped with a depth regulator. All seed will be drilled on the contour. The seed will be planted between one-quarter and one-half inch deep. Where drilling is not possible (i.e., too steep or rocky), the seed will be broadcast and the area raked or chained to cover the seed. If the seed mixture is broadcast, the rate will be doubled. The certified or registered seed mixture and application rates will be obtained from the Authorized Officer.
- 9. Seeding will be done either in late autumn (September 1 to November 15, before freeze up) after completion or as early as possible the following spring to take advantage of available ground moisture. The seeding shall be repeated until a satisfactory stand, as determined by the Authorized Officer, is obtained. The first evaluation of growth will be made following completion of the first growing season after seeding.
- 10. If the well is determined to be one capable of successful production, EOG Resources understands that the installation of production facilities would occur only after appropriate review and approval by the USFS and BLM.
- B. DRY HOLE/ABANDONED LOCATION: Prior to final abandonment reclamation work, a sundry notice describing the proposed reclamation plan will be submitted to the Authorized Officer for approval.

#### 11. SURFACE OWNERSHIP

Access road:

Federal – Ashley National Forest

Location:

Federal - Ashley National Forest

#### 12. OTHER INFORMATION

- A. A cultural resources survey was performed by Montgomery Archaeological Consultants and are attached to this APD. A SHPO concurrence letter, dated 9/19/05, was received at the Ashley NF office on 9/28/05.
- B. EOG Resources, Inc. will inform all persons in the area who are associated with this project that they are subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator will immediately stop work that might further disturb such materials, and contact the AO. Within five working days the AO will inform the operator as to:
  - Whether the materials appear eligible for the National Register of Historic Places;
  - The mitigation measures the operator will likely have to undertake before the site can be used.
  - A time frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wished, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials that may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that required mitigation has been completed, the operator will then be allowed to resume construction.

- C. As operator, EOG Resources, Inc. will control noxious weeds along ROWs for roads, well sites, or other applicable facilities. A list of noxious weeds will be obtained from the USFS, or the appropriate County Extension Office. On USFS-administered land, a Pesticide Use proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.
- D. The drilling rig and ancillary equipment will be removed from the location prior to commencement of completion operations. Completion operations will be conducted using a completion/workover rig.
- E. The Nutters Canyon #1-2 is an exploratory well. As such, temporary production facilities may be installed on the well pad. No permanent production facilities will be constructed until such time that they are needed to produce the well and additional NEPA documentation of such actions is performed and approval granted.

#### LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION

#### PERMITTING AGENT

Kaylene Gardner EOG Resources, Inc. 600 17<sup>th</sup> Street, Suite 1100N Denver, CO 80202 Telephone: (307) 276-4842 **DRILLING OPERATIONS** 

Donald Presenkowski EOG Resources, Inc. P.O. Box 250 Big Piney, WY 83113 Telephone: (307) 276-4865

All lease or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approval plan of operations, and any applicable Notice to Lessees. EOG Resources, Inc. is fully responsible for the actions of their subcontractors. A copy of these conditions will be furnished to the field representative to insure compliance.

A copy of the approved APD and any necessary ROW grant will be on location during construction of the location and drilling activities.

#### Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by EOG Resources, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

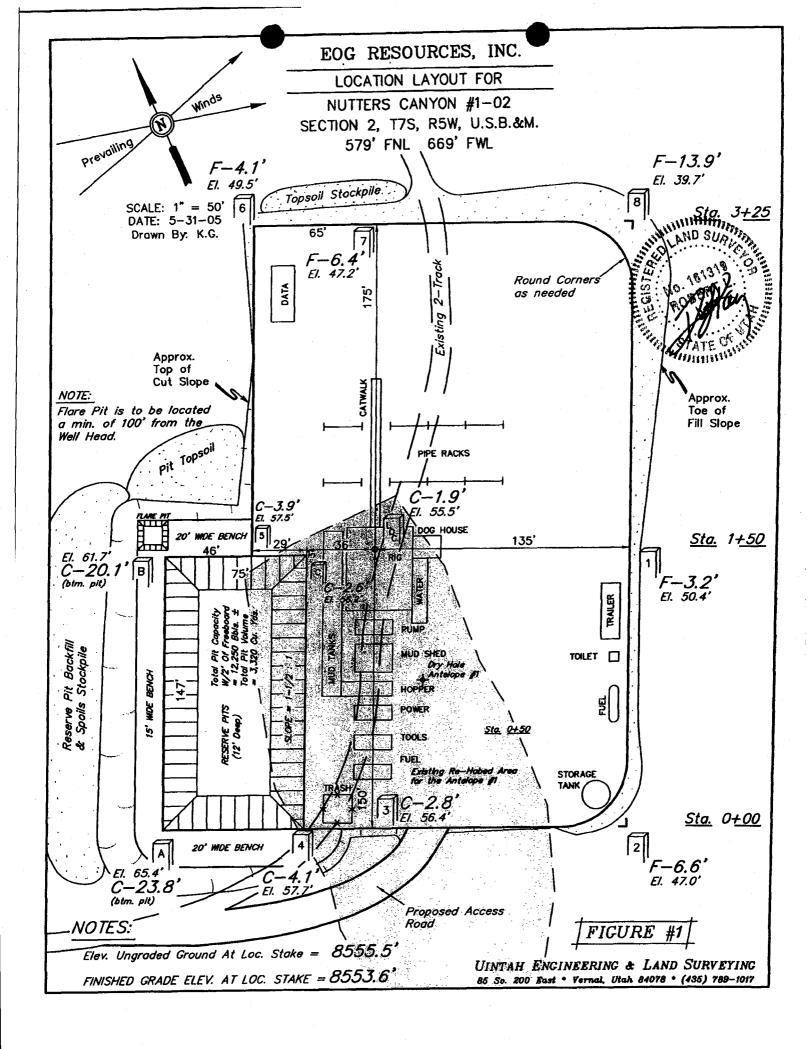
Date October 27, 2005

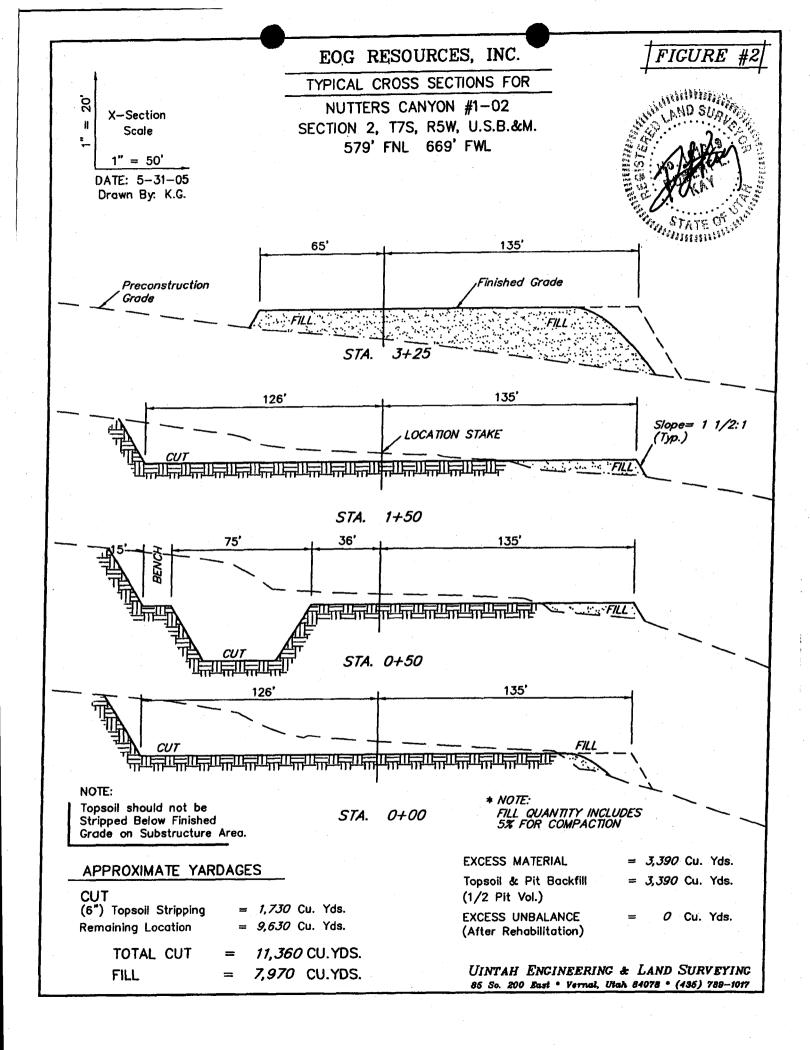
Raylene R. Gardner Regulatory Assistant

### EOG RESOURCES, INC. NUTTERS CANYON #1-02 SECTION 2, T7S, R5W, U.S.B.&M.

PROCEED IN A SOUTHWESTERLY DIRECTION FROM MYTON, UTAH APPROXIMATELY 8.6 MILES ALONG U.S. HIGHWAY 40 TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, THEN SOUTHWESTERLY DIRECTION APPROXIMATELY 8.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTH; TURN LEFT AND PROCEED IN A SOUTHERLY, DIRECTION APPROXIMATELY 0.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY DIRECTION APPROXIMATELY 15.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN NORTHEASTERLY APPROXIMATELY 2.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.7 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE SOUTHEAST; FOLLOW ROAD FLAGS IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 130' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM MYTON, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 36.2 MILES.





### **EOG RESOURCES, INC.** NUTTERS CANYON #1-02

LOCATED IN UINTAH COUNTY, UTAH **SECTION 2, T7S, R5W, U.S.B.&M.** 

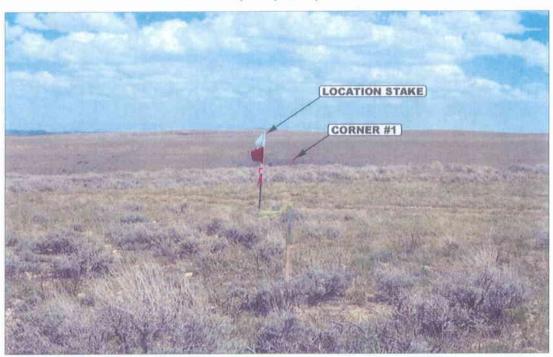


PHOTO: VIEW FROM LOCATION STAKE TO CORNER #1

CAMERA ANGLE: SOUTHEASTERLY

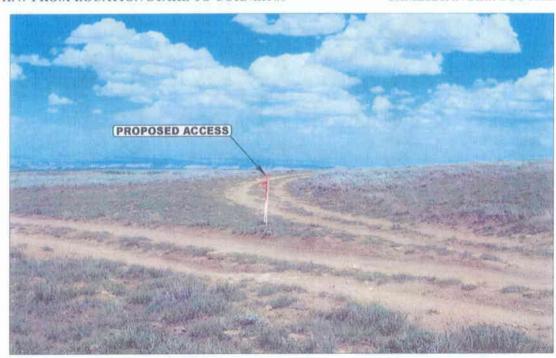


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: SOUTHERLY



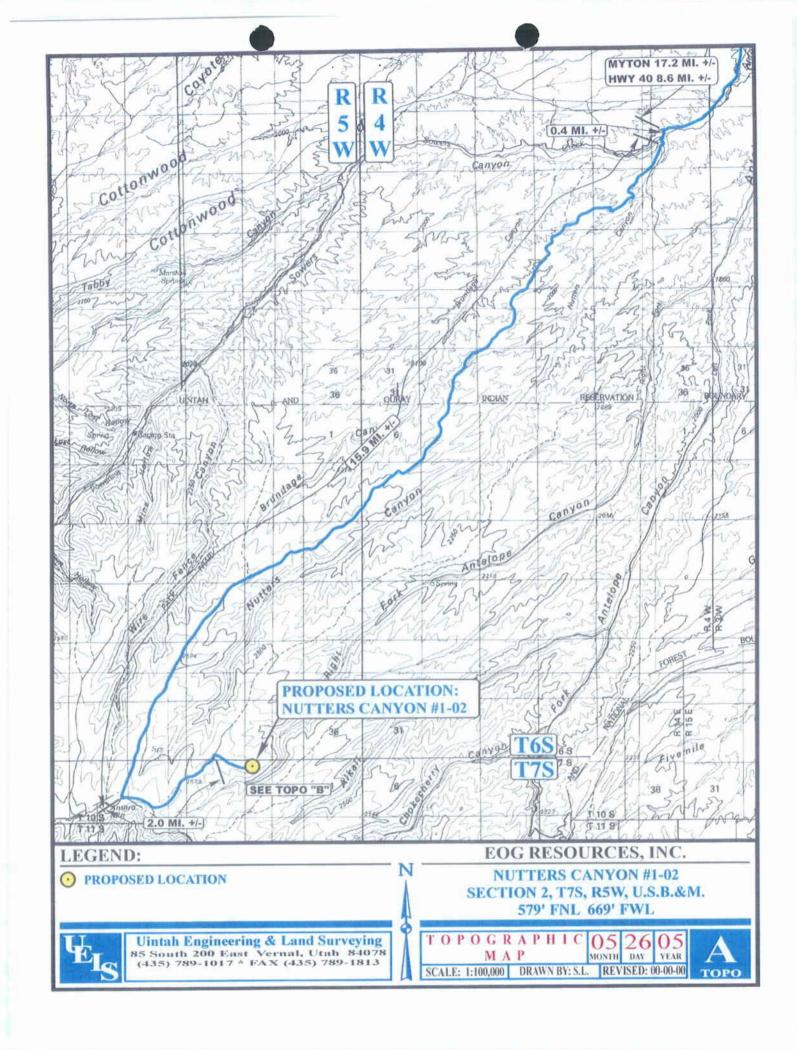
Uintah Engineering & Land Surveying 85 South 200 East Vernal, Utah 84078 435-789-1017 Vernal, Utah 84078 uels@uelsinc.com

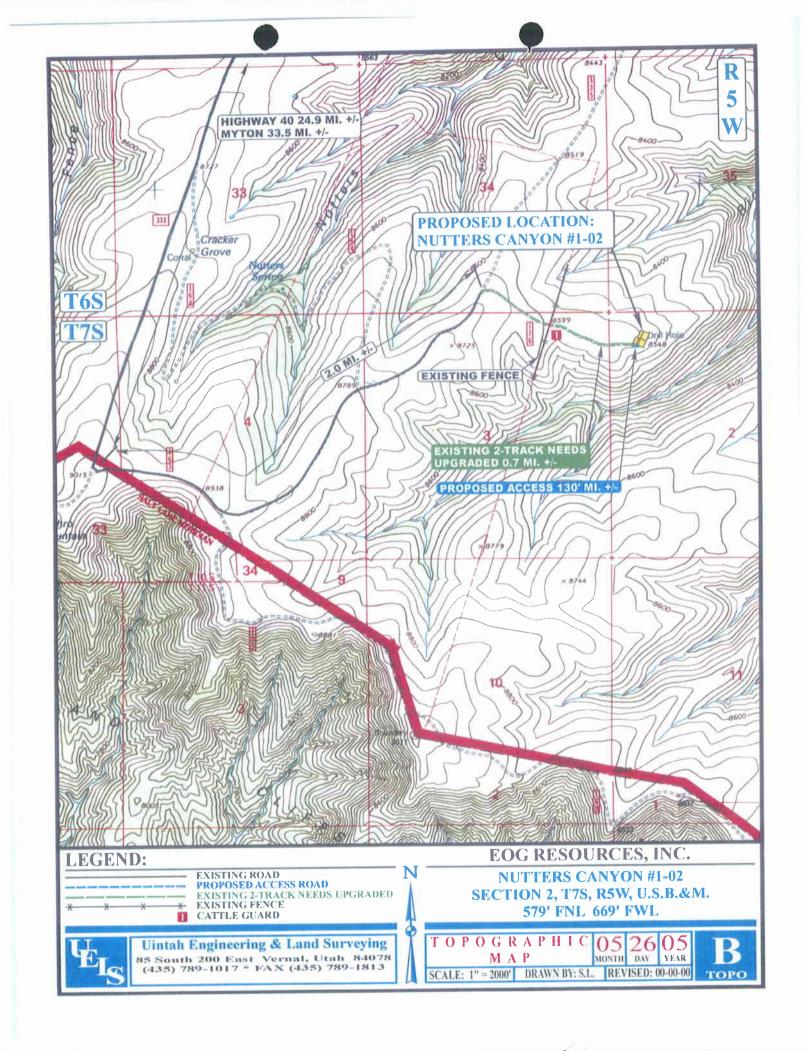
LOCATION PHOTOS

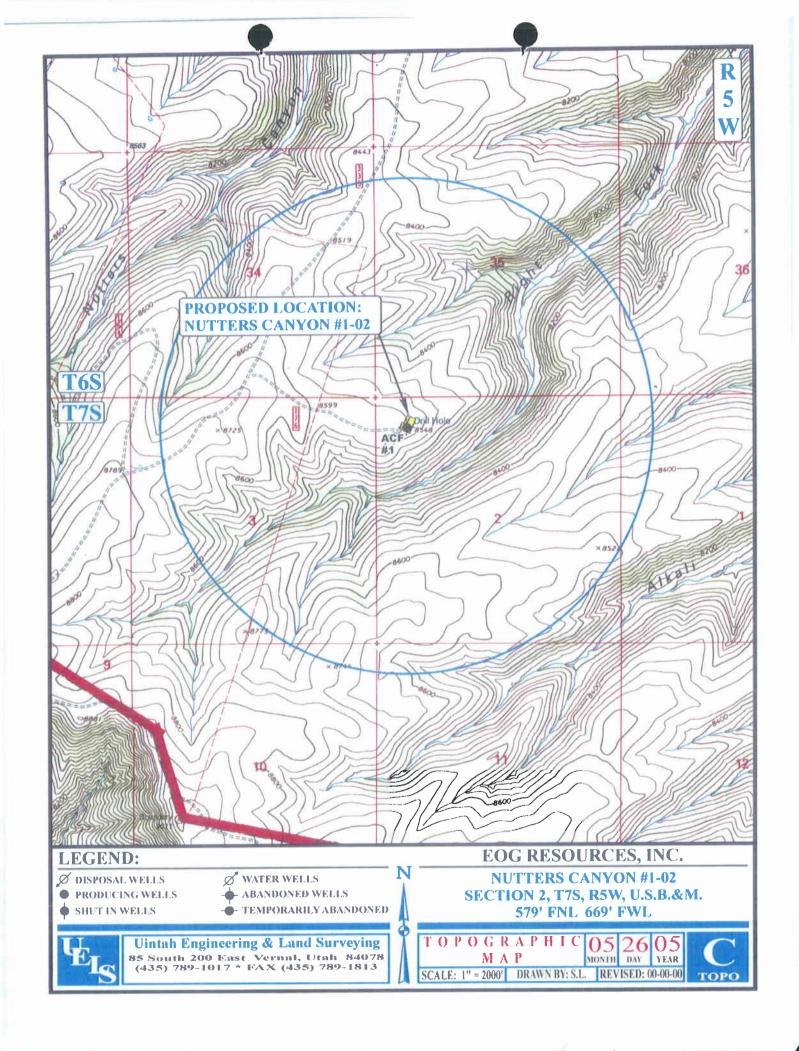
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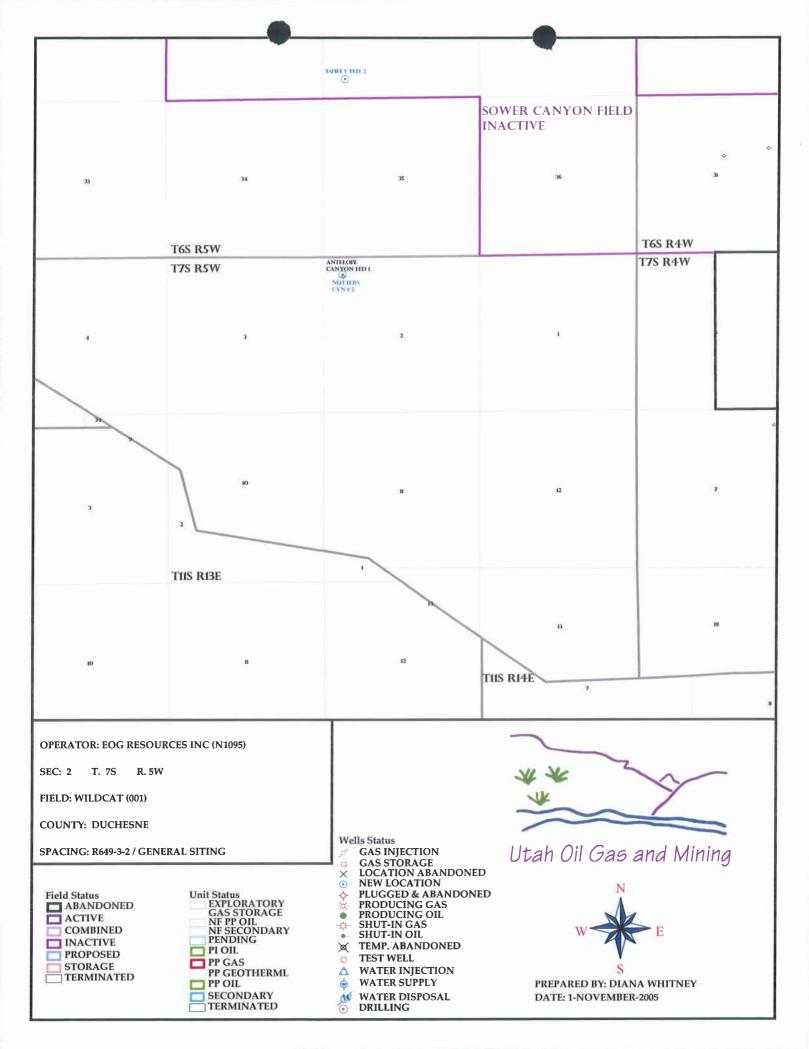
TAKEN BY: J.F. | DRAWN BY: S.L. | REVISED: 00-00-00







| APD RECEIVED: 10/31/2005   | API NO. ASSIGNED: 43-013-32942   |         |
|--|--|---------|
| WELL NAME: NUTTERS CYN 1-2  OPERATOR: EOG RESOURCES INC ( N9550 )  |  |         |
|  |  |         |
| CONTACT: KAYLENE GARDNER   | PHONE NUMBER: 307-276-4842   |         |
| PROPOSED LOCATION:  NWNW 02 070S 050W  SURFACE: 0579 FNL 0669 FWL  BOTTOM: 0579 FNL 0669 FWL  DUCHESNE  WILDCAT ( 1 )  LEASE TYPE: 1 - Federal  LEASE NUMBER: UTU-78242  SURFACE OWNER: 1 - Federal  PROPOSED FORMATION: BLKHK  COALBED METHANE WELL? NO | INSPECT LOCATN BY: / /  Tech Review Initials Date  Engineering  Geology  Surface  LATITUDE: 39.90760  LONGITUDE: -110.4214   |         |
| COALDED PETITATE WELD: NO  |  |         |
| RECEIVED AND/OR REVIEWED:  Plat  Bond: Fed[1] Ind[] Sta[] Fee[]  (No. NM-2308  Potash (Y/N)  Oil Shale 190-5 (B) or 190-3 or 190-13  Water Permit  (No. 49-1501  RDCC Review (Y/N)  (Date:)  NA Fee Surf Agreement (Y/N)  Intent to Commingle (Y/N)      | LOCATION AND SITING:  R649-2-3.  Unit  R649-3-2. General         Siting: 460 From Qtr/Qtr & 920' Between Well         R649-3-3. Exception  Drilling Unit         Board Cause No:         Eff Date:         Siting:  R649-3-11. Directional Drill | <br>11s |
| STIPULATIONS: 1- Edul Ouppoint  2. Spacing Stip  |  |         |





State of Utah

Department of Natural Resources

MICHAEL R. STYLER Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA Division Director JON M. HUNTSMAN, JR. Governor

GARY R. HERBERT Lieutenant Governor

November 1, 2005

EOG Resources, Inc. 600 17th St., Ste. 1100N Denver, CO 80202

Re:

Nutters Canyon 1-2 Well, 579' FNL, 669' FWL, NW NW, Sec. 2, T. 7 South,

R. 5 West, Duchesne County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-013-32942.

Sincerely,

Gil Hunt

**Associate Director** 

In Flain

pab Enclosures

cc:

**Duchesne County Assessor** 

Bureau of Land Management, Vernal District Office

| Operator:          | EOG Resources,            | Inc.              |                         |
|--------------------|---------------------------|-------------------|-------------------------|
| Well Name & Number | Nutters Canyon            | 1-2               |                         |
| API Number:        | 43-013-32942<br>UTU-78242 | ×                 |                         |
| Location: NW NW    | Sec2_                     | <b>T.</b> 7 South | <b>R.</b> <u>5 West</u> |

#### **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

Contact Dan Jarvis at (801) 538-5338

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.
- 5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.



EOG Resources, line. 211 South 1000 East Vernal, UT 84078 P.O. Box 1815 Vernal, UT 84078 (435) 789-0790

43-643-32942

March 24, 2006

Mr. Michael Lee Bureau of Land Management 1770 South 500 East Vernal, Ut 84078

RE:

Nutters Canyon 1-2 579 FNL 669 FWL

NW/NW, Section 2, T7S, R5W

**Duchesne County, UT** 

Dear Mr. Lee:

Attached please find an amended Eight Point Drilling Plan for the referenced pending Application to Drill.

Sincerely,

Kaylene R. Gardner Regulatory Assistant

Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY

RECEIVED
APR 0 5 2006

DIV. OF OIL, GAS & MINING

#### 1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS, & WATER ZONES:

| FORMATION              | DEPTH (KB) | <b>OBJECTIVE</b> |
|------------------------|------------|------------------|
| Green River            | 320'       |                  |
| Wasatch                | 4,320'     |                  |
| Dark Canyon            | 8,984'     |                  |
| KMV Price River        | 9,366'     |                  |
| KMV Price River Middle | 10,113'    |                  |
| Bluecastle             | 10,683'    |                  |
| KMV Price River Lower  | 11,106'    | GAS              |
| Pressure Top           | 11,107'    |                  |
| KMV Castlegate         | 11,583'    | GAS              |
| KMV Blackhawk          | 11,970'    | GAS              |
| Sunnyside              | 12,473'    | GAS              |
| Kenilworth             | 12,799'    | GAS              |
| Aberdeen               | 12,983'    | GAS              |
|                        |            |                  |

EST. TD: 13,400' or 400' ± below Aberdeen top

**Anticipated BHP 7600 PSI** 

Fresh water zones may exist anywhere in the upper 4000' of the well. All such zones will be isolated by cement to surface.

3. PRESSURE CONTROL EQUIPMENT:

Production Hole – 11", 5000 PSI BOPE

BOP Schematic diagrams attached.

Intermediate Hole:

13 5/8" 5000 psi annular or

13 5/8" rotating head to be used as a diverter

#### 4. CASING PROGRAM:

|             |            |                     |               |         |               |              |             | <u>RA</u> | <u> FINGS</u>    |          |
|-------------|------------|---------------------|---------------|---------|---------------|--------------|-------------|-----------|------------------|----------|
| <b>HOLE</b> | SIZE       | INTERVAL            | <b>LENGTH</b> | SIZE    | <b>WEIGHT</b> | <b>GRADE</b> | <b>CONN</b> | COLL. PSI | <b>BURST PSI</b> | TENS PSI |
| Surface:    | 17 1/2"    | 0' - 250'± KB       | 250' ±        | 13 3/8" | 48.0 #        | H-40         | ST&C        | 740 PSI   | 1730 PSI         | 322,000# |
| Intermedia  | te 12 1/4" | 250' - 3400'± KB    | 3400° ±       | 9 5/8"  | 36.0#         | J-55         | ST&C        | 2020 PSI  | 3570 PSI         | 394,000# |
| Production  | 7 7/8"     | $3400' - TD \pm KB$ | 13,400° ±     | 4 1/2"  | 13.5 #        | P-110        | LT&C        | 10670 PSI | 12410 PSI        | 338.000# |

Note: 12-1/4" surface hole will be drilled to a total depth of 200'± below the base of the Green River lost circulation zone and cased with 9-5/8" as shown to that depth. Drilled depth may be shallower or deeper than the 3400' shown above depending on the actual depth of the loss zone.

#### All casing will be new or inspected.

#### 5. Float Equipment:

#### Surface Hole Procedure (0-250' Below GL):

Guide Shoe

Wooden wiper plug

Centralizers: 1 - 5-10' above shoe, every collar for next 3 joints (4 total).

#### **Intermediate Hole Procedure (250'-3400'):**

Guide Shoe

Insert Float Collar (PDC drillable)

Cents.: 1-5' above shoe, top of jts. #2 and #3 then every 5<sup>th</sup> joint to surface.

#### **Production Hole Procedure (3400'-TD):**

FS, 1 joint of casing, FC, and balance of casing to surface. Centralize 5' above shoe on joint #1, top of joint #2, then every 2nd joint to 400' above top of shallowest potentially-productive zone. Thread lock FS, top and bottom of FC, and top of 2<sup>nd</sup> joint.

#### 6. MUD PROGRAM

#### Surface Hole Procedure (0-250' below GL):

Air/air mist or aerated water.

#### Intermediate Hole Procedure (250'-3400'):

Water (circulate through reserve pit) with Gel/LCM sweeps.

#### **Production Hole Procedure (3400'-TD):**

3400'- 9'000': Reserve pit water. Circulate through reserve pit with Gel/LCM and PHPA sweeps as needed.

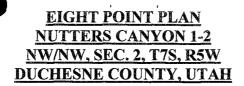
9000'-TD: Weighted LSND, 9-11 PPG, 9-10 pH, less than 20 cc's water loss. Run LCM sweeps periodically to seal off loss zones or more often as hole dictates. Expect increasing gas shows requiring heavier mud weights from the top of the Price River onward. Treat CO2 contamination with DESCO CF if mud properties dictate.

#### 7. VARIANCE REQUESTS:

#### Reference: Onshore Oil and Gas Order No. 2 - Item E: Special Drilling Operations

While drilling surface hole, EOG Resources, Inc. requests a variance to regulations requiring the blooie line to be 100' in length.

To reduce location excavation, the blooie line will be 75' in length.



#### 8. EVALUATION PROGRAM:

Logs:

Mud log from base of surface casing to TD.

Schlumberger Platform Express with Di-pole Sonic from TD to base of surface casing in 1 run. Rotary sidewall cores as needed and based upon results from first log run.

#### 9. CEMENT PROGRAM:

#### Surface Hole Procedure (0-250' Below GL)

**Lead:** 300 sx. (100% excess volume) Class 'G' cement with 2% S1 (CaCl2) & 0.25 pps D29 (cellophane flakes), mixed at 15.8 ppg, 1.15 cu. ft./sk., 4.95 gps water.

**Top Out:** Top out with Class 'G' cement with 2% S1 (CaCl2) in mix water, 15.8 ppg, 1.15 cu. ft./sk., 4.95 gps via 1" tubing set at 25' if needed.

#### Intermediate Hole Procedure (250'-3,400')

**Lead:** 260 sx. (50% excess volume) Class 'G' lead cement (coverage from 2400'-250') with 5% D44 (Salt), 12% D20 (Bentonite), 1% D79% (Extender), 0.25% D112 (Fluid Loss Additive), 0.2% D46 (Anti-Foamer) & 0.25 pps D29 (Cellophane flakes) mixed at 11.0 ppg, 3.91 ft3/sk., 24.5 gps water.

Tail: 290 sx. (50% excess volume) Class 'G' cement (coverage from 3400'-2400') with 10% D53 (Gypsum), 2% S1 (CaCl2) & 0.25 pps D29 (Cellophane flakes) mixed at 14.2 ppg, 1.61 ft3/sk., 7.9 gps water.

If openhole logs are run in intermediate hole, cement volumes will be based on openhole log caliper volume plus 10% excess.

#### Production Hole Procedure (3400' to TD)

**Lead:** 730 sx Hi-Lift G (coverage from 400' above top productive interval to 3200' (± 200' into intermediate casing )) w/ 12% D20 (Bentonite), 1% D79 (Extender), 0.2% D46 (Antifoamer), 0.2% D167 (Fluid Loss Additive), 0.2 % D13 (Retarder), 0.25 pps D29 (cellophane flakes), mixed at 11.5 ppg, 3.05 cu. ft./sk., 18.65 gps water.

**Middle:** 300 sx 50:50 Poz:G (coverage from 12000' to 400' above top productive interval) w/ 2% D20 (Bentonite), 0.1% D46 (Antifoamer), 0.15% D13 (Retarder), 0.2% D167 (Fluid Loss Additive), 0.2% D65 (Dispersant), mixed at 14.0 ppg, 1.29 cu. ft./sk., 5.9 gps water..

#### **Production Hole Procedure (Continued):**

**Tail:** 270 sx 50:50 Poz:G (coverage from TD-12000') w/ 2% D20 (Bentonite), 35.0% D-66 (Silica), 0.1% D46 (Antifoamer), 0.075% D800 (Retarder), 0.2% D167 (Fluid Loss Additive), 0.2% D65 (Dispersant), mixed at 14.1 ppg, 1.53 cu. ft./sk., 7.0 gps water.

**Note:** Production string cement volumes shown are based on gauge hole +30% excess and assuming a top productive zone at 10,700'. Actual volumes will be based upon open hole caliper log volume plus 5% excess and top of tail cement to 400' above the highest indicated productive interval. Tail cement composition will be adjusted as needed for bottom hole temperature indicated on open hole logging tools.

#### 10. ABNORMAL CONDITIONS:

#### **INTERMEDIATE HOLE (250'-3400')**

**Potential Problems:** Lost circulation throughout the section and minor amounts of gas may be present. Hydrocarbon shows and/or water zones will be monitored for and reported.

#### PRODUCTION HOLE (3400'-TD)

**Potential Problems:** Research indicates that mud losses are possible throughout all of the 7-7/8" hole. Sloughing shales and keyseat development are possible in the Wasatch Formation. CO2 contamination in the mud is possible in the Price River (Mesaverde).

#### 11. STANDARD REQUIRED EQUIPMENT:

- A. Choke Manifold
- B. Upper and Lower Kelly Cock
- C. Stabbing Valve
- D. Electronic/mechanical Mud monitoring equipment (PVT)

#### 12. HAZARDOUS CHEMICALS:

No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

(Attachment: BOP Schematic Diagram)

#### **STATE OF UTAH** DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS AND MIN

| COMPIDENTIAL |  |  |  |  |
|--------------|--|--|--|--|
|--------------|--|--|--|--|

| RCES UNITED TO THE REPORT OF T |   |
|--|---|
| RCES 雅書 独自 中ではいい かいりょう デ   |   |
| NING COMMENDATED FOR   | 5. LEASE DESIGNATION AND SERIAL NUMBER: |
|  | 1171170040                              |

|  | UTU 78242  |   |  |  |  |  |
|--|--|---|--|--|--|--|
| SUNDRY   | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  |   |  |  |  |  |
| Do not use this form for proposals to drill new<br>drill horizontal later  | wwells, significantly deepen existing wells below current bottom-horals. Use APPLICATION FOR PERMIT TO DRILL form for such p | ole depth, reenter plugged wells, or to roposals. | 7. UNIT or CA AGREEMENT NAME:                  |  |  |  |
| 1 TYPE OF WELL   | drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.                                      |   |  |  |  |  |
| 2. NAME OF OPERATOR:   |  |   | 9. API NUMBER:                                 |  |  |  |
| EOG RESOURCES, INC.  |  |   | 43-013-32942                                   |  |  |  |
| 3. ADDRESS OF OPERATOR:  | NET 04070  | PHONE NUMBER:                                     | 10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES |  |  |  |
| <del></del>  | VERNAL STATE UT ZIP 84078  | (435) 789-0790                                    | NATURAL BUTTES                                 |  |  |  |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE: 579 FNL   | COUNTY: DUCHESNE   |   |  |  |  |  |
| QTR/QTR, SECTION, TOWNSHIP, RANGE  | E, MERIDIAN: NWNW 2 7S 5W S.L  | B. & M  | STATE: UTAH                                    |  |  |  |
| 11. CHECK APPRO  | OPRIATE BOXES TO INDICATE NATU   | RE OF NOTICE, REPO                                | ORT, OR OTHER DATA                             |  |  |  |
| TYPE OF SUBMISSION   |  | TYPE OF ACTION                                    |  |  |  |  |
|  | ACIDIZE DEEF   |   | REPERFORATE CURRENT FORMATION                  |  |  |  |
| NOTICE OF INTENT (Submit in Duplicate)   |  | CTURE TREAT                                       | SIDETRACK TO REPAIR WELL                       |  |  |  |
| `  |  |   | TEMPORARILY ABANDON                            |  |  |  |
| Approximate date work will start:  |  | CONSTRUCTION                                      |  |  |  |  |
|  |  | RATOR CHANGE                                      | TUBING REPAIR                                  |  |  |  |
|  | CHANGE TUBING  | S AND ABANDON                                     | VENT OR FLARE                                  |  |  |  |
| SUBSEQUENT REPORT (Submit Original Form Only)  | CHANGE WELL NAME   | BACK  | WATER DISPOSAL                                 |  |  |  |
| Date of work completion:   | CHANGE WELL STATUS PRO   | DUCTION (START/RESUME)                            | WATER SHUT-OFF                                 |  |  |  |
| Date of work completion.   | COMMINGLE PRODUCING FORMATIONS REC   | LAMATION OF WELL SITE                             | ✓ OTHER: APD EXTENSION                         |  |  |  |
|  | CONVERT WELL TYPE  | OMPLETE - DIFFERENT FORMATION                     | REQUEST  |  |  |  |
| Describe Proposed or Completed Operations. Clearly show all pertinent details including dates, depths, volumes, etc.  EOG Resources, Inc. respectfully requests the APD for the referenced well be extended for one year.  Approved by the Utah Division of Oil, Gas and Mining  Date: (1-22-04)  By: Copy Sent to Operator Date: 13.00  Initials: 13.00 |  |   |  |  |  |  |
| NAME (PLEASE PRINT) Kaylene R.   | Gardner  | TITLE Sr. Regulatory A                            | Assistant                                      |  |  |  |
| SIGNATURE SIGNATURE  | )n. 1  | DATE 10/31/2006                                   |  |  |  |  |
|  | <del></del>  |   |  |  |  |  |

(This space for State use only)

**RECEIVED** NOV 0 1 2006

#### Application for Permit to Drill Request for Permit Extension Validation

(this form should accompany the Sundry Notice requesting permit extension)

| Well Name:<br>Location:  |                                       | ON 1-2<br>(NWNW), SECTION 2, T7S,<br>EOG RESOURCES, INC.                           | R5W S.L.B.&M                                  |
|--------------------------|---------------------------------------|--|---|
|                          | Permit Issued:                        |  |   |
| above, hereby            | verifies that the                     | h legal rights to drill on t<br>information as submitte<br>emains valid and does n |   |
| Following is a verified. | checklist of some                     | e items related to the ap  | oplication, which should be                   |
|                          | rivate land, has t<br>en updated? Yes | the ownership changed,<br>s□No□  | if so, has the surface                        |
| •                        |                                       | the vicinity of the proposents for this location? Ye                               | sed well which would affect<br>es⊟ No ☑       |
|                          |                                       | er agreements put in pla<br>proposed well? Yes⊟ No                                 |   |
|                          |                                       | to the access route incl<br>proposed location? Yes                                 | uding ownership, or right-<br>□ No ☑          |
| Has the approv           | ved source of wa                      | ater for drilling changed  | ? Yes□No☑                                     |
|                          | ire a change in p                     | changes to the surface<br>plans from what was dis                                  | location or access route cussed at the onsite |
| Is bonding still         | in place, which                       | covers this proposed we  | ell? Yes ☑No □                                |
| Tolling to               | <u> </u>                              |  | 10/31/2006                                    |
| Signature                | <i></i>                               |  | Date  |
| Title: SR. REG           | ULATORY ASSIST                        | ANT  |   |
| Representing:            | EOG RESOURCE                          | ES, INC.   |   |

RECEIVED NOV 0 1 2006

#### **STATE OF UTAH** DEPARTMENT OF NATURAL RESOURCES

CONFIDENTIAL

| DIVISION OF OIL, GAS AND MINING  | UTU 78242   |
|--|---|
| SUNDRY NOTICES AND REPORTS ON WELLS  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:                   |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. | 7. UNIT or CA AGREEMENT NAME:                           |
| 1. TYPE OF WELL OIL WELL GAS WELL OTHER  | 8. WELL NAME and NUMBER:                                |
| 2. NAME OF OPERATOR:   | Nutters Canyon 1-2  9. API NUMBER:                      |
| EOG RESOURCES, INC.  | 43-013-32942  |
| 3. ADDRESS OF OPERATOR: 600 17th St., Suite 1000N CITY Denver STATE CO ZIP 80202 (303) 824-5526  | 10. FIELD AND POOL, OR WILDCAT: Exploratory             |
| 4. LOCATION OF WELL  |   |
| FOOTAGES AT SURFACE: 579 FNL 669 FWL 39.907675 LAT 110.422119 LON  | COUNTY: Duchesne  |
| QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 2 7S 5W S.L.B. & M   | STATE: UTAH   |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPO   | ORT, OR OTHER DATA                                      |
| TYPE OF SUBMISSION TYPE OF ACTION  |   |
| NOTICE OF INTENT  ACIDIZE  DEEPEN  FRACTURE TREAT  | REPERFORATE CURRENT FORMATION  SIDETRACK TO REPAIR WELL |
| (Submit in Duplicate)  | TEMPORARILY ABANDON                                     |
| CHANGE TO PREVIOUS PLANS OPERATOR CHANGE   | TUBING REPAIR   |
| CHANGE TUBING PLUG AND ABANDON   | VENT OR FLARE   |
| SUBSEQUENT REPORT (Submit Original Form Only) CHANGE WELL NAME PLUG BACK   | WATER DISPOSAL  |
| Date of work completion:  CHANGE WELL STATUS  PRODUCTION (START/RESUME)  | WATER SHUT-OFF  |
| COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE  | ✓ OTHER: <u>APD EXTENSION</u> REQUEST                   |
| CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION   | negoes1   |
| 12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volun   |   |
| EOG Resources, Inc. respectfully requests the APD for the referenced well be extended for  | r one year.   |
|  |   |
|  |   |
| Approved by the<br>Utah Division of  |   |
| Oil, Gas and Mining  |   |
| Oil, Gas and Mining  |   |
|  |   |
| Date:  |   |
| By:  |   |
| by. State Asset  | was spirited the classes                                |
| B  | 10-11-70  |
|  | AMILIA TARRESTA PARTIES                                 |
|  | •••   |
| NAME (PLEASE PRINT) Mary A. Maestas TITLE Regulatory Assis   | stant   |
| SIGNATURE Mary A. Maya DATE 10/4/2007  |   |
|  |   |

(This space for State use only)

**RECEIVED** OCT 1 0 2007

# Application for Permit to Drill Request for Permit Extension Validation

(this form should accompany the Sundry Notice requesting permit extension)

| Well Name:<br>Location:<br>Company Per   |   | (NWNW), SECTION 2, T7S, EOG RESOURCES, INC.         | R5W S.L.B.&M                                 |  |  |  |  |
|--|---|---|--|--|--|--|--|
| above, hereby  | The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. |   |  |  |  |  |  |
| Following is a verified.   | checklist of some   | e items related to the ap                           | plication, which should be                   |  |  |  |  |
|  | rivate land, has t<br>en updated? Yes   | the ownership changed,<br>s□No□                     | if so, has the surface                       |  |  |  |  |
| •  | Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes□No☑   |   |  |  |  |  |  |
|  |   | er agreements put in pla<br>proposed well? Yes⊟No   |  |  |  |  |  |
| Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes□No ☑ |   |   |  |  |  |  |  |
| Has the approved source of water for drilling changed? Yes□No☑   |   |   |  |  |  |  |  |
| Have there be which will requevaluation? Ye  | ire a change in ا   | changes to the surface I<br>plans from what was dis | ocation or access route cussed at the onsite |  |  |  |  |
| Is bonding still   | l in place, which   | covers this proposed we                             | all? Yes⊠No□                                 |  |  |  |  |
| Mary   | a Marja   |   | 10/4/2007<br>Date                            |  |  |  |  |
| Signature)   |   | _   | Date   |  |  |  |  |
| Title: REGUL   | ATORY ASSISTANT   | <u> </u>  |  |  |  |  |  |
| Representing:  | EOG RESOURCI  | ES, INC.  |  |  |  |  |  |
|  |   |   |  |  |  |  |  |

OCT 1 0 2007



### United States Department of the Interior

**BUREAU OF LAND MANAGEMENT** 

Vernal Field Office 170 South 500 East Vernal, UT 84078 (435) 781-4400 Fax: (435) 781-4410

http://www.blm.gov/ut/st/en/fo/vernal/html



IN REPLY REFER TO: 3160 UT08300

May 27, 2008

Kaylene R. Gardner EOG Resources, Inc. 1060 East Hwy 40 Vernal, UT 84078

43 013 32942

Re:

Notice of Expiration Well No. Nutters Canyon 1-2 NWNW, Sec. 2, T7S, R5W Duchesne County, Utah Lease No. UTU-78242

#### Dear Kaylene:

The Application for Permit to Drill (APD) the above-referenced well was approved on August 11, 2006. No extension of the original APD was requested. According to our records, no known activity has transpired at the approved location. In view of the foregoing, this office is notifying you that the approval of the referenced application has expired. If you intend to drill at this location in the future, a new Application for Permit to Drill must be submitted.

This office requires a letter confirming that no surface disturbance has been made for this drill site. Any surface disturbance associated with the approved location of this well is to be rehabilitated. A schedule for this rehabilitation must be submitted to this office. Your cooperation in this matter is appreciated.

If you have any questions regarding this matter, please contact me at (435) 781-4455.

Sincerely,

Cindy Swerson

Cindy Severson Land Law Examiner

cc: UDOGM

RECEIVED
JUN 0 2 2008

DIV. OF OIL, GAS & MINING

### Division of Oil, Gas and Mining OPERATOR CHANGE WORKSHEET

| R  | OUTING |
|----|--------|
| 1. | DJJ    |
| 2  | CDW    |

| X - Change of Operator (Well Sold) Operator Name Change/Merger  |          |          |                                 |                          |                   |                        |          |            |
|---|----------|----------|---------------------------------|--------------------------|-------------------|------------------------|----------|------------|
| The operator of the well(s) listed below has cha  | nged     | l, effec | ctive: 10/1/2007                |                          |                   |                        |          |            |
| FROM: (Old Operator):   |          |          | TO: ( New Operator):            |                          |                   |                        |          |            |
| N9550-EOG Resources, Inc.   |          |          | N3295-Vantage Energy Uinta, LLC |                          |                   |                        |          |            |
| 600 17th St, Suite 1000N  |          |          |                                 | _                        |                   | East, Suite 107        |          |            |
| Denver, CO 80202  |          |          |                                 | Englev                   | vood, CO 8        | 0112                   |          |            |
| Phone: 1 (303) 824-5582   |          |          |                                 | Phone: 1 (303)           | 386-8600          |                        |          |            |
| CA No.  |          |          |                                 | Unit:                    |                   |                        |          |            |
| WELL NAME   | SEC      | TW       | N RNG                           | API NO                   | ENTITY            | LEASE TYPE             | l .      | WELL       |
| OUTTOUANDAUL 1 15   | 1.5      | locog    | Incorr.                         | 4201222040               | NO                | F 1 1                  | TYPE     | STATUS     |
| QUITCHAMPAU 1-15<br>NUTTERS CYN 1-2   | 15<br>02 |          |                                 | 4301332940<br>4301332942 |                   | Federal                | GW       | APD        |
| NUTTERS CTN 1-2   | 02       | 10/05    | J030 W                          | 4301332942               |                   | Federal                | GW       | APD        |
| OPERATOR CHANGES DOCUMENT<br>Enter date after each listed item is completed 1. (R649-8-10) Sundry or legal documentation v 2. (R649-8-10) Sundry or legal documentation v | vas re   | eceive   | d from th                       | ne NEW operato           | or on:            | 7/18/2008<br>7/18/2008 |          |            |
| 3. The new company was checked on the <b>Depar</b>  |          |          | ommer                           | •                        | -                 |                        |          | 10/30/2007 |
| 4a. Is the new operator registered in the State of  |          | ı:       |                                 | Business Numb            | er:               | 6584978-0161           | ī        |            |
| 4b. If <b>NO</b> , the operator was contacted contacted   |          |          |                                 |                          |                   |                        |          |            |
| 5a. (R649-9-2)Waste Management Plan has been i  | recei    | ved on   | ı:                              | IN PLACE                 | _                 |                        |          |            |
| 5b. Inspections of LA PA state/fee well sites com   | plete    | on:      |                                 | n/a                      |                   |                        |          |            |
| 5c. Reports current for Production/Disposition &  | Sunc     | dries o  | n:                              | ok                       | -                 |                        |          |            |
| 6. Federal and Indian Lease Wells: The B  | LM a     | and or   | the BIA                         | has approved th          | -<br>he merger, 1 | name change,           |          |            |
| or operator change for all wells listed on Fede   | ral o    | r India  | ın leases                       | on:                      | BLM               | not yet                | BIA      |            |
| 7. Federal and Indian Units:  |          |          |                                 |                          |                   |                        | •        |            |
| The BLM or BIA has approved the successor of unit operator for wells listed on:  n/a  |          |          |                                 |                          |                   |                        |          |            |
| 8. Federal and Indian Communization A   | gree     | ment     | s ("CA                          | "):                      |                   |                        |          |            |
| The BLM or BIA has approved the operator  | for      | all wel  | ls listed                       | within a CA on:          | :                 | n/a                    |          |            |
| 9. Underground Injection Control ("UIC  |          |          |                                 |                          |                   | orm 5, Transfer        | of Autho | ority to   |
| Inject, for the enhanced/secondary recovery u   | nit/p    | roject   | for the v                       | vater disposal w         | ell(s) listed     | on:                    | n/a      |            |
| DATA ENTRY:   | •        | •        |                                 | •                        | ( )               |                        |          | -          |
| 1. Changes entered in the Oil and Gas Database  | e on:    |          |                                 | 7/31/2008                |                   |                        |          |            |
| 2. Changes have been entered on the Monthly C   | pera     | ator C   | hange S                         |                          | -<br>1 <b>:</b>   | 7/31/2008              |          |            |
| 3. Bond information entered in RBDMS on:  |          |          |                                 | n/a                      | _                 |                        |          |            |
| 4. Fee/State wells attached to bond in RBDMS of   | n:       |          |                                 | n/a                      | -                 |                        |          |            |
| 5. Injection Projects to new operator in RBDMS  |          |          |                                 | n/a                      | _                 |                        |          |            |
| 6. Receipt of Acceptance of Drilling Procedures   | for A    | APD/N    | lew on:                         |                          | 7/31/2008         |                        |          |            |
| BOND VERIFICATION:  |          |          |                                 |                          |                   |                        |          |            |
| 1. Federal well(s) covered by Bond Number:  |          |          |                                 | UTB000288                | _                 |                        |          |            |
| 2. Indian well(s) covered by Bond Number:   | _        |          |                                 | n/a                      | •                 |                        |          |            |
| 3a. (R649-3-1) The <b>NEW</b> operator of any state/1   |          |          |                                 | •                        | Number            | n/a                    |          |            |
| 3b. The <b>FORMER</b> operator has requested a relea  | se of    | liabili  | ity from                        | their bond on:           |                   |                        |          |            |
| The Division sent response by letter on:  |          |          |                                 |                          | -                 |                        |          |            |
| LEASE INTEREST OWNER NOTIFIC  |          |          |                                 |                          |                   |                        |          |            |
| 4. (R649-2-10) The <b>NEW</b> operator of the fee well  |          |          |                                 |                          | - ,               | from the Division      | 1        |            |
| of their responsibility to notify all interest own <b>COMMENTS</b> :  | ers o    | t this c | change o                        | n:                       | n/a               |                        |          |            |

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES

| DIVISION OF OIL, GAS AND MINING  |  |                          | 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-78242 |  |
|--|--|--------------------------|---|--|
| SUNDRY NOTICES AND REPORTS ON WELLS  |  |                          | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:             |  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. |  |                          | 7. UNIT or CA AGREEMENT NAME:                     |  |
| TYPE OF WELL     OIL WELL  |  | Transfer APD             |   | 8. WELL NAME and NUMBER: Nutters Canyon 1-2                                  |
| 2. NAME OF OPERATOR:<br>EOG Resources, Inc   | N 9550   |                          |   | 9. API NUMBER:<br>4301332942   |
| 3. ADDRESS OF OPERATOR:<br>600 17th St., Suite 1000N   | Denver CO  | 80202                    | PHONE NUMBER: (303) 824-5582                      | 10. FIELD AND POOL, OR WILDCAT: Wildcat                                      |
| 4. LOCATION OF WELL  | 2000   | 00202                    | (000) 024 0002                                    | · · · · · · · · · · · · · · · · · · ·  |
| FOOTAGES AT SURFACE: 579'  | FNL & 669' FWL   |                          |   | COUNTY: Duchesne   |
| QTR/QTR, SECTION, TOWNSHIP, RA   | NGE, MERIDIAN: NWNW 2 T7S F  | R5W 6                    |   | STATE: UTAH  |
| 11. CHECK APP  | PROPRIATE BOXES TO INDICAT   | TE NATURE                | OF NOTICE, REPO                                   | RT, OR OTHER DATA  |
| TYPE OF SUBMISSION   |  |                          | YPE OF ACTION                                     |  |
| NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start:  | ACIDIZE  ALTER CASING  CASING REPAIR   | DEEPEN FRACTURE NEW CONS |   | REPERFORATE CURRENT FORMATION  SIDETRACK TO REPAIR WELL  TEMPORARILY ABANDON |
|  | CHANGE TO PREVIOUS PLANS CHANGE TUBING   | OPERATOR  PLUG AND       | CHANGE  | TUBING REPAIR VENT OR FLARE  |
| SUBSEQUENT REPORT (Submit Original Form Only)  | CHANGE WELL NAME   | PLUG BACK                | •   | WATER DISPOSAL   |
| Date of work completion:   | CHANGE WELL STATUS   | =                        | ON (START/RESUME)                                 | WATER SHUT-OFF   |
|  | COMMINGLE PRODUCING FORMATIONS  CONVERT WELL TYPE  | =                        | ION OF WELL SITE                                  | OTHER:   |
| 12. DESCRIBE PROPOSED OR C   | COMPLETED OPERATIONS. Clearly show all j   | pertinent details in     | cluding dates depths volum                        | nes etc  |
| 2007. Vantage is now co  | .C (Vantage) has purchased the repositions of the considered to be the operator of this conducted upon the leased lands. | s lease and i            | s responsible under                               |  |
| Vantage Energy Uinta LL<br>116 Inverness Drive Eas<br>Englewood, CO 80112  | t, Suite 107 (303) 386-  | 5 B<br>8600              | and UTB   | 060288   |
| Mark Rothenberg<br>Senior Engineer   | Date: 6/3  | 0/08                     | _   |  |
| NAME (PLEASE PRINT) HAND   | er Schafer<br>Surviv   |                          | = Operation                                       | ns Clerk   |
| SIGNATURE MANUAL   | a way  | DA                       | TE  |  |
| (This space for State use only)  |  |                          |   |  |

APPROVED 7/3/108

**RECEIVED** JUL 18 2008

(See Instructions on Reverse Side)

Division of Oil, Gas and Mining Earlene Russell, Engineering Technician

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

#### Request to Transfer Application or Permit to Drill

(This form should accompany a Sundry Notice, Form 9, requesting APD transfer)

| Well name:                               | NUTTERS CANYON 1-2 |   |    |    |
|--|--------------------|---|----|----|
| API number:                              | 4301332942         |   |    |    |
| Location:                                | NWNW               | 2 | 78 | 5W |
| Company that filed original application: | EOG RESOURCES INC  | 1 |    |    |
| Date original permit was issued:         | 11/01/2005         |   |    |    |
| Company that permit was issued to:       | EOG RESOURCES INC  |   |    |    |

| Check<br>one | Desired Action:   |  |  |  |  |
|--------------|---|--|--|--|--|
|              | Transfer pending (unapproved) Application for Permit to Drill to new operator   |  |  |  |  |
|              | The undersigned as owner with legal rights to drill on the property, hereby verifies that the information as submitted in the pending Application for Permit to Drill, remains valid and does not require revision. The new owner of the application accepts and agrees to the information and procedures as stated in the application. |  |  |  |  |
| ✓            | Transfer approved Application for Permit to Drill to new operator   |  |  |  |  |
|              | The undersigned as owner with legal rights to drill on the property as permitted, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.   |  |  |  |  |

| Following is a checklist of some items related to the application, which should be verified.  If located on private land, has the ownership changed?                |   | No |
|---|---|----|
|   |   | 1  |
| If so, has the surface agreement been updated?  |   |    |
| Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?                           |   | 1  |
| Have there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?                                      |   | 1  |
| Have there been any changes to the access route including ownership or right-of-way, which could affect the proposed location?                                      |   | 1  |
| Has the approved source of water for drilling changed?  |   | 1  |
| Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? |   | 1  |
| Is bonding still in place, which covers this proposed well? Bond No. UTB000288  | 1 |    |

Any desired or necessary changes to either a pending or approved Application for Permit to Drill that is being transferred, should be filed on a Sundry Notice, Form 9, or amended Application for Permit to Drill, Form 3, as appropriate, with necessary supporting information as required.

| Name (please print) Mark Bothers                     | Title Senior Engineer |
|--|-----------------------|
| Signature Multiple                                   | Date 6/30/08          |
| Representing (company name) Vaplage Energy Uinta LLC |                       |

The person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator properties of the person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator properties of the person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator properties of the person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator properties of the person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator properties of the person signing this form must have legal authority to represent the company or individual(s) to be listed as the new operator properties of the person signing the

DIV. OF OIL, GAS & MINING

### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

|                        | DESIGNATION OF AGE                      | NT OR OPERAT | OR        |
|------------------------|---|--------------|-----------|
| The undersigned is, on | record, the holder of oil and gas lease |              |           |
| LEASE NAME:            | Nutters Canyon (Exxon Mobil Corp.)      |              |           |
| LEASE NUMBER:          | UTU78242                                |              |           |
| and hereby designates  |   |              |           |
| NAME:                  | Vantage Energy Uinta LLC                |              |           |
| ADDRESS:               | 116 Inverness Drive East, Suite 107     |              |           |
|                        | city Englewood                          | state CO     | zip 80112 |

as his (check one) agent  $\square$  / operator  $\square$ , with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Division Director or Authorized Agent may serve written or oral instructions in securing compliance with the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah with respect to:

(Describe acreage to which this designation is applicable. Identify each oil and gas well by API number and name. Attach additional pages as needed.)

UTU78242 - VERNAL FIELD OFFICE DUCHESNE ASHLEY NF:

T7S R5W Sec. 2: ALL; T7S R5W Sec. 3: ALL; T7S R5W Sec. 10: ALL; T7S R5W Sec. 11: ALL.

Plugged & Abandoned: Antelope Canyon Fed 1 - API No. 43-013-10414

Proposed: Nutters Canyon 1-2 - API No. 43-013-32942

Sec 2 TTS R5W

It is understood that this designation of agent/operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah. It is also understood that this designation of agent or operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated agent/operator, the lessee will make full and prompt compliance with all rules, lease terms or orders of the Board of Oil, Gas and Mining of the State of Utah or its authorized representative.

The lessee agrees to promptly notify the Division Director or Authorized Agent of any change in this designation.

|          | - , , , ,                            |     | _         | · -            | _         |         |    |
|----------|--------------------------------------|-----|-----------|----------------|-----------|---------|----|
| Effec    | tive Date of Designation: 06/30/2008 |     |           |                |           |         |    |
| BY:      | (Name) (SHARLES E. ALVOID 11         | OF: | (Company) | Exxon Mobil Co | rporation | Lesse   | ee |
|          | (Signature)                          |     | (Address) | PO Box 4610    |           |         |    |
|          | (Title) ATTORNEY-IN-FACT             |     |           | city Houston   |           |         |    |
|          | (Phone) 713-431-2068                 |     |           | state TX       | zip 772   | 10-4610 |    |
| (5/2000) |                                      |     |           |                | F         | RECEIV  | ED |

|          | •   |
|----------|---|
|          | FORM 9  |
| 1        | 5. LEASE DESIGNATION AND SERIAL NUMBER:       |
| L        | UTU78242                                      |
|          | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:         |
|          |   |
|          | 7. UNIT or CA AGREEMENT NAME:                 |
|          | NA ASKLY Forest unit                          |
|          | Nutters Canyon 1-2                            |
|          | 9. API NUMBER:                                |
|          | 43-013-32942                                  |
|          | 10. FIELD AND POOL, OR WILDCAT:               |
|          | Wildcat                                       |
| COU      | NTY:DUCHESNE                                  |
| U.S.B    | .&M. STATE: UT                                |
| PORT     | , OR OTHER DATA                               |
|          |   |
|          | ☐ REPERFORATE CURRENT                         |
|          | FORMATION                                     |
|          | SIDETRACK TO REPAIR WELL  TEMPORARILY ABANDON |
|          | ☐ TEMPORARILY ABANDON ☐ TUBING REPAIR         |
|          | U VENT OR FLARE                               |
|          | ☐ WATER DISPOSAL                              |
| )        | ☐ WATER BISFOSAL                              |
|          | OTHER:  |
| ATION    | <u> </u>                                      |
| volurnes | s, etc.                                       |
|          |   |
|          | y Uintah Engineering & Land                   |
| ine we   | lisite lies within the pending                |
|          |   |
| ber 27   | , 2005, to the Bureau of Land                 |
|          | ras assigned API No. 43-013-                  |
|          | ust 11, 2006. EOG requested                   |
|          |   |
| he com   | pliance with all of the lease                 |
| y EOG    |   |
| <u>.</u> |   |
|          | *   |
| f Sec. 2 | 2 T7S R5W directionally to a                  |
|          | drill this well to 6,229' to the              |

|   | DEPARTMENT OF  | NATURAL RESOUR   | RCES                                | MEID  | CAITIAI                                   |                     | - Tu                                |  |                        |
|---|--|--|-------------------------------------|---|---|---------------------|-------------------------------------|--|------------------------|
|   | DIVISION OF O  | IL, GAS AND MII  | NINGU                               | NHIU  | ENTIAL                                    |                     |                                     |  | IAL NUMBER             |
| SUNDRY  |  |  |                                     |   |   |                     |                                     |  | NAME:                  |
| Danish we think it is a first of the same |  |  |                                     |   |   |                     | 7. UNIT or CA                       | AGREEMENT NAME                                   |                        |
| drill horizo  | drill new wells, significantly deep<br>ontal laterals. Use APPLICATION   | en existing wells below curn<br>IN FOR PERMIT TO DRILL f   | rent bottom-hol-<br>orm for such pr | e depth, reenter p<br>oposals.  | lugged wells, or to                       |                     |                                     |  | + Sover                |
| 1. TYPE OF WELL  OIL WELL   | ☐ GAS WELI   | тто 🗓  | ER                                  |   |   |                     |                                     |  | 1.0                    |
| 2. NAME OF OPERATOR:  |  |  |                                     |   |   |                     |                                     |  | 1-2                    |
| Vantage Energy Uir 3. ADDRESS OF OPERATOR:  | nta LLC  |  | ···                                 |   |   |                     |                                     |  |                        |
| 116 Inverness Drive East, Suite 1   | 107 Englewood  |  | 12                                  |   |   |                     |                                     |  | Т:                     |
| 4. LOCATION OF WELL FOOTAGES AT SURFACE:  | 579' FNI   |  | 669' EW                             | /I  |   | COLIN               | TV.                                 | DUCHEONE   |                        |
| <del>-</del>  |  | NW /4 NW /4 .  |                                     |   | B 5W                                      |                     |                                     | ······································           | <del></del>            |
|   |  |  |                                     |   |   |                     |                                     |  |                        |
| TYPE OF SUBMISSION  | T TOTAL BOXE   | e to indicati  | LIVATO                              |   |   | On I,               | OR OT                               | HER DATA   |                        |
| X NOTICE OF INTENT  | ☐ ACIDIZE  |  | Π νε                                | EDEN  |   |                     | REPE                                | RFORATE CURRENT                                  |                        |
| (Submit in Duplicate)   | I  |  |                                     |   | EAT                                       |                     | _                                   |  | D WELL                 |
| Approximate date work will start.   |  |  | □ NE                                | W CONSTRU   | JCTION                                    |                     |                                     |  |                        |
|   |  |  | _                                   |   |   |                     | ☐ TUBII                             | NG REPAIR  |                        |
| SUBSEQUENT REPORT   | ☐ CHANGE WELL  | NAME   |                                     |   | ANDON                                     |                     |                                     |  |                        |
| (Submit Original Form Only)  Date of Work Completion:   | 1 —  |  |                                     |   | TART/RESUME)                              |                     |                                     |  |                        |
| <b>p</b>  | FORMATIONS   | DUCING   | ☐ RE                                |   |   |                     |                                     |  |                        |
|   | ☐ CONVERT WEL  | L TYPE   | ☐ REG                               | COMPLETE - DI   | FFERENT FORMA                             | TION                |                                     |  |                        |
| EOG Resources, Inc. (EOG Management (BLM) in Vern 32942. The state approval with the well be drilled to a vice Vantage Energy Uinta LLC terms and conditions for that Vantage respectfully requestion and vantage plans to drill this with bottomhole location of ±660 Wasatch formation.   | submitted the original and to the Utah was granted on Novertical depth of 13,4 (Vantage) acquired to portion of the least that all informed from the surface of FNL ±1,980 FWL   | Division of Oil, Greenber 1, 2005. If 100' to the Aberdal the mineral lease associated with action regarding location of 579' (NE/4 NW/4) of | this well FNL 669' Sec. 2 T         | Mining (UD pproval was ation.  ill be responded originally in the kept control of the | onsible for the submitted by onfidential. | well wan Augune com | as assigr<br>st 11, 20<br>pliance v | ned API No. 43 06. EOG reque  vith all of the le | -013-<br>ested<br>ease |
|   | 117/34/  | -110   | 4160                                | . 53  |   |                     |                                     |  |                        |
| NAME (PLEASE PRINT) Mark F  | OIL WELL GAS WELL X OTHER  Nutros Carryon 1-2  NATION.  Nutros Carryon 1-2  NATION.  Nutros Carryon 1-2  NATION.  National Composition.  National Composition. |  |                                     |   |   |                     |                                     |  |                        |
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| (This space for State use only)   | -  | Utah I   | Divisio                             | n of  | *   |                     |                                     |  |                        |
| Sederal Approval o  | of tiniiii<br>rv   | Oil, Gas   | and M                               | lini.n <b>g</b>   |   |                     | RE                                  | ECEIVE   | )                      |
| Action is "   | TO OPERATOR  | Dates O  | 9-15                                | 5-08  |   |                     |                                     | UG 1 2 200                                       | 8                      |

(5/2000)

AUG 1 2 2008

DIV. OF OIL, GAS & MINING

#### Vantage Energy Uinta LLC Nutters Canyon 1-2 API No. 43-013-32942

Surface: 579' FNL 669' FWL (NW/4 NW/4)

BHL: ±660' FNL ±1,980' FWL (NE/4 NW/4) Within a 50' Radius

Sec. 2 T7S R5W
Duchesne County, Utah
Federal Lease: UTU78242

#### DRILLING PROGRAM

(All Drilling Procedures will be followed as Per Onshore Orders No. 1 and No. 2)

This Application for Permit to Drill (APD) was initially filed under the Notice of Staking (NOS) process as stated per Onshore Order No. 1 and supporting Bureau of Land Management (BLM) documents. The process was changed to the "APD" process per Onshore Order No. 1. This document was prepared using language and requirements consistent with those previously approved by BLM for nearby wells. This APD process included an on-site meeting with BLM representatives and EOG Resources, Inc (EOG), at which time the specific concerns of EOG and BLM were discussed. Best efforts have been made to address specific concerns of the BLM representatives.

Vantage Energy Uinta LLC (Vantage) is the designated operator by ExxonMobil for this mineral lease and Vantage will be responsible for the compliance with all of the lease terms and conditions for that portion of the lease associated with the APD as originally submitted by EOG.

Please contact Mr. Mark Rothenberg, Senior Drilling Engineer at Vantage, 303-386-8600 if there are any questions or concerns regarding this Drilling Program.

#### a) GEOLOGIC MARKERS

Anticipated tops of geologic markers are indicated in **Table 1** 

**Table 1 Estimated Tops of Geologic Markers** 

| Formation                | Vertical<br>Depth | Measured<br>Depth | Subsea<br>Depth | Description                |
|--------------------------|-------------------|-------------------|-----------------|----------------------------|
| Uinta                    | Surface           | Surface           | 8,568'          | Sandstone/siltstone/shale  |
| Green River Upper Marker | 1,832'            | 1,855'            | 6,736'          | Sand and Siltstone         |
| Mahogany                 | 2,370'            | 2,410'            | 6,198'          | Oil Shale                  |
| Douglas Creek            | 4,022'            | 4,117'            | 4,546'          | Sandstone/siltstone/shale  |
| Black Shale              | 4,578'            | 4,691'            | 3,990'          | Sandstone/siltstone/shale  |
| Castle Peak              | 4,937'            | 5,062'            | 3,631'          | Sandstone/siltstone/shale  |
| Uteland Butte            | 5,387'            | 5,527'            | 3,181'          | Carbonate/shale/sandstone  |
| Wasatch                  | 5,567'            | 5,713'            | 3,001'          | Shale/sandstone            |
| Total Depth              | 6,067'            | 6,229'            | 2,501'          | TD ± 500' TVD into Wasatch |

Surface Elevation: 8,556' (Ground) 8,570' (Est. KB). Proposed Total Depth: 6,229' / 6,067' (MD/TVD)

#### b) DEPTHS OF WATER AND MINERAL-BEARING ZONES

Potential water-bearing zones in the vicinity include the Wasatch and Green River formations (Robson and Banta, 1995. Ground Water Atlas of the United States Segment 2, Hydrologic Investigations Atlas

730-C, U.S. Geological Survey, Reston, VA). A review of data from the Utah Division of Water Rights indicated no permitted water wells within three miles of the proposed location. Utah Division of Oil, Gas, and Mining surface casing depth requirements will protect potential aquifers in the area.

The depths to potential water and/or mineral-bearing zones are indicated in **Table 2**.

Table 2: Principal Anticipated Water and Mineral-bearing Zones

| Formation                | Measured<br>Depth | Subsea | <b>Potential Contents</b> |
|--------------------------|-------------------|--------|---------------------------|
| Uinta                    | Surface           | 8,568' | Surface                   |
| Green River Upper Marker | 1,855'            | 6,736' | Possible Water            |
| Mahogany                 | 2,410'            | 6,198' | Possible Water            |
| Douglas Creek            | 4,117'            | 4,546' | Oil / Gas                 |
| Black Shale              | 4,691'            | 3,990' | Oil / Gas                 |
| Castle Peak              | 5,062'            | 3,631' | Oil / Gas                 |
| Uteland Butte            | 5,527'            | 3,181' | Oil / Gas                 |
| Wasatch                  | 5,713'            | 3,001' | Oil / Gas                 |

#### c) MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL EQUIPMENT

The maximum anticipated surface pressure for this well is calculated to be **1,335 psi**. Therefore, rules for a 2,000 psi rated BOP and choke manifold system are applicable. However, the typical rig inventory will consist of a 3,000 psi rated BOP and choke manifold. As such, the rig's BOP and choke manifold equipment will be tested to the standards for a 2,000 psi BOP system. A diagram of the proposed 2,000 psi rated BOP stack configuration is shown in **Fig. 1**.

BOPs and choke manifold will be installed and pressure tested before drilling out from under surface casing (subsequent pressure tests will be performed whenever pressure seals are broken) and then will be checked daily as to mechanical operating condition. BOPs will be pressure tested at least once every 30 days. The annular preventer, pipe rams, and blind rams will be activated on each trip and Operator will conduct weekly BOP drills with the rig crew.

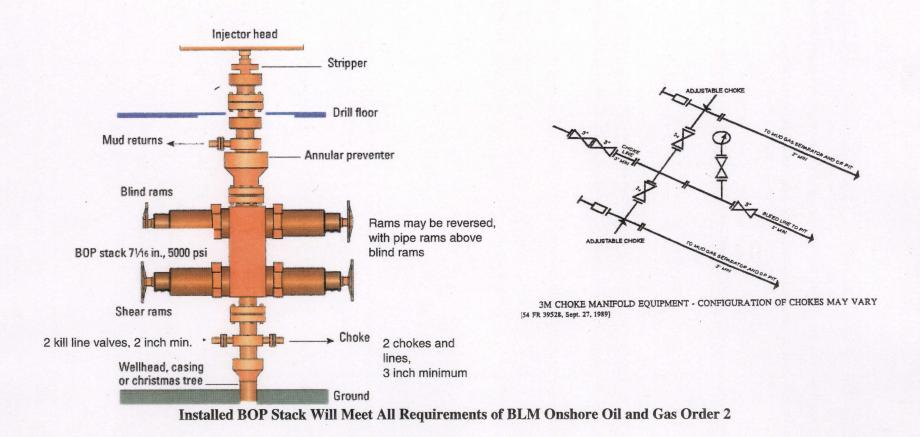
Ram type preventers and related pressure control equipment will be pressure tested to rated working pressure of the stack assembly if a test plug is used. If a plug is not used, the stack assembly will be tested to the rated working pressure of the stack assembly or to 70% of the minimum internal yield of the casing, whichever is less. Please see variance request at end of program for this section.

Annular type preventers will be pressure tested to 50% of their rated working pressure. A Sundry Notice (Form 3160~5), along with a copy of BOP test report, shall be submitted to the BLM within 5 working days following the test. All casings strings will be pressure tested to 0.22psi/ft or 1,500psi, whichever is greater, not to exceed 70% of internal yield. Please see variance request at end of program for this section.

Casing shoe will be tested by drilling out from below the shoe and testing to the maximum expected mud weight as discussed in the mud program specifications below. Both manual and remote closing mechanisms will be installed on the BOP stack and will be readily available to the driller.

# Figure 1: Pressure Control Schematic Operator and Well Name Location County and State

Generalized Setup for 2,000 psi Working Pressure System Actual BOP Stack Used May Vary in Some Details



### Statement on Accumulator System and Location of Hydraulic Controls

The drilling rig has not yet been selected for this well. Selection will take place after approval of this application. Manual and/or hydraulic controls will be in compliance with *Onshore Oil and Gas Order No.* 2 for 2,000 psi systems. Irregardless of the rig selected, the rig's accumulator system shall have sufficient capacity to close all BOP's and retain 200 psi above precharge. The proposed pressure control equipment will meet or exceed standards specified in the Order.

#### d) CASING PROGRAM

Casing of quality equal to or better than that indicated in **Tables 3** and **4** will be used for this well. Actual casing used will be dependent on availability.

**Table 3 Proposed Casing Program** 

| Depth (MD)    | Hole Diameter | Casing Diameter | Casing Weight and Grade               |
|---------------|---------------|-----------------|---------------------------------------|
| $0 - \pm 50'$ | 20"           | 14"             | Optional Conductor - Only if Required |
| 0 – 350'      | 12 1/4"       | 8 5/8"          | 24# J55 ST&C, API New Pipe            |
| 0 – 6,229'    | 7 7/8"        | 5 1/2"          | 15.5# K55 LT&C, API New Pipe          |

Table 4: Proposed Casing Specifications and Design Safety Factors

| Size                | Collapse<br>(psi)  | Burst<br>(psi) | Body<br>Strength<br>(1,000 lbs.) | Joint<br>Strength<br>(1,000 lbs.) | Thread | *Safety Factors          |                       | ors                        |
|---------------------|--|----------------|----------------------------------|-----------------------------------|--------|--------------------------|-----------------------|----------------------------|
|                     |  |                |                                  |                                   |        | Burst<br>Design<br>(1.2) | Collapse Design (1.0) | Tension<br>Design<br>(1.4) |
| 14"                 | NA – 0.219" wall structural and to seal shallow gravels to allow air drilling surface hole |                |                                  |                                   | Weld   | NA                       | NA                    | NA                         |
| 8 5/8"<br>24# J55   | 1,370  | 2,950          | 381                              | 244                               | ST&C   | 1.42                     | 6.27                  | 4.17                       |
| 5 1/2"<br>15.5# J55 | 4,040  | 4,810          | 248                              | 217                               | LT&C   | 1.25                     | 1.51                  | 1.62                       |

#### \*Safety Factor Calculation Assumptions:

#### **Surface Casing:**

Burst Load: Assumes greater of MASP (maximum anticipated surface pressure) exposure during a worse case kick scenario while drilling at total depth, with mud/gas mixture whose gradient is 0.22 psi/ft. OR, minimum required casing test pressure.

#### MASP

Load = (Formation Gradient 
$$-0.22 \text{ psi/ft}$$
) \* Total Depth, TVD =  $(0.44 \text{ psi/ft} - 0.22 \text{ psi/ft})$  \*  $6,067 \text{ ft}$ . =  $1,335 \text{ psi}$ 

#### TEST PRESSURE

Load = Greater of 1500 psig or 0.70\*2950 = 2065 psig SF Burst = 2,950 psi / 2,065 psi = 1.42

Collapse Load: Assumes worse case loading of evacuated casing during cementing process.

Cement density = 12.0 ppg

Load = 12.0 ppg \* 0.052 \* 350 ft
= 218.4 psi

SF Collapse = 1370 psi / 218.4 psi = 6.27

**Tension Load:** Assumes air weight at total depth + 50,000 lbs overpull design factor. Load = (24 lbs/ft \* 350 ft) + 50,000 lbs overpull = 58,400 lbs **SF Tension = 244,000 lbs / 58,400 lbs = 4.17** 

Test Pressure =

#### **Production Casing**

**Burst Load:** Assumes maximum load applied during the hydraulic fracture stimulations. It is Vantage Energy's policy not to exceed 80% rating of the production casing during the stimulation treatment. The 80% rating factor will also be the casing test pressure.

```
Load = 4810 psi * 0.80
= 3848 psi
SF Burst = 4810 psi / 3848 psi = 1.25
```

**Collapse Load:** Assumes worse case loading applied during the production cycle, with evacuated casing, and normally pressured formation gradient applied externally.

```
Load = 0.44 psi/ft * 6067 ft
= 2670 psi
SF Collapse = 4040 psi / 2670 psi = 1.51
```

**Tension Load:** Assumes buoyed weight of casing at total depth + 50,000 lbs overpull design factor.

```
Load = [15.5 lbs/ft * 6229 ft* ((65.5 – 8.6) / 65.5)] + 50,000 lbs
= 83,873 lbs + 50,000 lbs
= 133,873 lbs
SF Tension = 217,000 lbs / 133,873 lbs = 1.62
```

#### e) CEMENT PROGRAM

**Table 5: Proposed Cement Program** 

| Depth          | roposed Ceme<br>Hole<br>Diameter | Casing<br>Diameter | Cement  |
|----------------|----------------------------------|--------------------|---|
| $0' - \pm 50'$ | 20"                              | 14"                | Optional structural conductor if required: Grout with approximately 4 cubic yards of redi-mix back to surface (includes 100% excess)  |
|                |                                  | A Marie Land       | TOC: Surface (Top-off per visual observation)   |
| 0' - 350'      | 12 1/4"                          | 8 5/8"             | Single Slurry System (350' – Surface) + 40' Shoe Joint 263 sks Class G + 2% CaCl <sub>2</sub> + ½ lb/sk celloflake.  Density: 15.8 ppg Yield: 1.15 cuft/sk Water: 5.0 gal/sk Excess = 100%  TOC: Surface (Top-off per visual observation)   |
| 0' - 6,229'    | 7 7/8"                           | 5 1/2"             | Lead System (4,000' - 2,000')  120 sks Type "V" + 16% Gel + 10 lbs/sk gilsonite + 3% Salt + ½ lb/sk celloflake  Density: 11.0 ppg Yield: 3.82 cuft/sk Water: 23.0 gal/sk *Excess: 30%  Tail System (6,229' - 4,000') + 40' Shoe Joint 400 sks 50:50 (Class G:Poz) + 2% gel + 10% salt + ½ lb/sk celloflake  Density: 14.2 ppg Yield: 1.26 cuft/sk Water: 5.75 gal/sk *Excess: 30% |

<sup>\*</sup>Note: The production hole cement volume will be determined by the caliper log, using caliper volume +10% excess factor.

#### f) MUD PROGRAM

The mud program for the proposed well is indicated in Table 6.

Table 6 Proposed Mud Program (See attached Halliburton mud program)

| Interval<br>(feet) | Mud Weight<br>(lbs/gallon) | Viscosity<br>(secs/qt) | Fluid Loss<br>(ccs/30 min) | Mud Type                  |  |
|--------------------|----------------------------|------------------------|----------------------------|---------------------------|--|
| $0 - \pm 50$ '     | NA                         | NA                     | NA                         | NA                        |  |
|                    | Set optiona                | al 14" conductor wit   | h bucket rig               | -                         |  |
| 50' - 350'±        | NA                         | NA                     | N/C                        | Air/Mist                  |  |
|                    | Run/ce                     | ement 8 5/8" surface   | casing                     |                           |  |
| 350'± - TD         | 8.5 – 8.6                  | 28 - 38                | < 20                       | KCL Water /<br>PHPA / DAP |  |
|                    | Run Logs – Ri              | ın/cement 5 1/2" pro   | oduction casing            |                           |  |

Surface Hole Comments: Spud with "spudder rig" and air drill surface hole misting as may be required to assist with cuttings removal. Report any water encountered to the appropriate agencies. Please see variance requests for this section.

Production Hole Comments: Dump spud mud to reserve pit. Drill out surface casing with fresh water adding 6 ppb DAP (Diammonium Phosphate) for shale inhibition and corrosion control. Circulate the reserve pit and flocculate out drill solids. Use pre-hydrated gel and PHPA polymer mud sweeps to assist with hole cleaning. At approximately 3,600' "mud up" and "close in" the fluid system to a 2-3% KCL base fluid. Use PHPA PAC and lignite for filtration control. Maintain fluid system through potential production zones to TD. Should seepage losses be experienced, control with LCM sweeps consisting of calcium carbonate, sawdust, cedar fiber, or mica.

Sufficient mud materials will be maintained on location to adequately maintain mud properties and contain any well kicks. Monitoring equipment will be installed on site to detect changes in mud volume.

#### g) LOGGING, CORING, AND TESTING PROGRAM

The proposed logging program is indicated in **Table 7**.

**Table 7 Proposed Logging Program** 

| Log Suites               | Depth Range          | Remarks  |  |  |  |
|--------------------------|----------------------|--|--|--|--|
| DIL-SP-LD-CN             | Surface Casing to TD | Standard "triple combo" equivalent with resistivity-spontaneous potential, lithodensity, compensated neutron, gamma ray, and caliper Will pull GR to surface |  |  |  |
| Dipole Sonic             | ± 4,000' to TD       | Optional – Operator's discretion<br>Rock property data   |  |  |  |
| Rotary Sidewall<br>Cores | ± 4,000' to TD       | Optional – Operator's discretion<br>PP/Lithology data (perm-porosity)  |  |  |  |

No coring or drill stem tests are planned. Mud logging unit will be operational from 200 feet above the Douglas Creek through total depth. Cuttings will be sampled every 20-30 feet.

Prospective zones from the Douglas Creek formation through total depth will be perforated, tested, and potentially acid-washed. It is anticipated that multi-stage hydraulic fracture stimulations of the reservoir will be required.

#### h) ANTICIPATED PRESSURES AND HAZARDS

No abnormal pressures are anticipated. Pressure gradient in the Green River and Wasatch sequence is expected to be sub-normal pressured to less than 0.44 psi/ft.

Estimated BHP Douglas Creek (4,022')

Estimated BHP Wasatch (5,567')

Estimated BHP Total Depth (6,067')

Hydrostatic head of gas/mud

Maximum design surface pressure

1,770 psi

2,450 psi

2,670 psi

0.22 psi/ft.

0.44 – 0.22 psi/ft x 6,067 ft = 1,335 psi

No H2S zones are anticipated. No abnormal lost circulation zones are anticipated. The proposed well is a southern extension test of development drilling being conducted by Berry Petroleum in T5-6-R5W. In addition, the proposed well is located on a previously drilled well site, the Antelope Canyon Federal No. 1, which was drilled to a total depth of 5,769' in June 1964, by Gulf Oil Corporation. There were no abnormal hazards reported during the drilling of this well.

#### i) DIRECTIONAL PROGRAM (See attached directional plan by Multi-Shot LLC)

The Nutters Canyon 1-02 will be drilled as a directional well, with a bottom hole located in the center of NE½ NW½ Section 2, T7S-R5W. The vertical section distance will be a planned distance of 1,313'. The bottom hole will be landed within a 50' radius target tolerance. The directional plan with consist of a "build-and-hold" profile, with a planned KOP of 500', a build rate of 1.5°/50', and a final hold inclination of 14.5 degrees.

The purpose of the directional well is twofold: 1) To gain distance away from the old wellbore, Antelope Canyon Federal No. 1, which was drilled in June 1964, to insure communication to this old wellbore does not occur during the stimulation treatments planned during the completion phase, and 2) to better position the well on a "perfect" 40-acre drainage pattern for future development considerations.

#### j) OTHER INFORMATION

**Contact Information and Personnel** 

Mailing Address

Vantage Energy Uinta LLC 116 Inverness Drive, Suite 107

Englewood, CO 80112

Main Number: 303-386-8600 Fax Number: 303-386-8700

Primary Contact: Mark Rothenberg

Office Direct: 303-386-8605 Fax Direct: 303-386-8705 Mobile: 303-885-5462

E-Mail: Mark.Rothenberg@VantageEnergy.com

Drilling Operations: John Moran Office Direct: 303-386-8610 Fax Direct: 303-386-8710 Mobile: 303-249-2234

E-Mail: John.Moran@VantageEnergy.com

Completion/Production Operations: Ed Long

Office Direct: 303-386-8639 Fax Direct: 303-386-8739 Mobile: 720-635-2125

E-Mail: Ed.Long@VantageEnergy.com

Geologist: Andrea Steinle
Office Direct: 303-386-8632
Fax Direct: 303-386-8732
Mobile: 303-408-0994

E-Mail: Andrea.Steinle@VantageEnergy.com

Landman: Michael Holland Office Direct: 303-386-8638 Fax Direct: 303-386-8738 Mobile: 303-396-3443

E-Mail: Michael.Holland@VantageEnergy.com

#### START DATE AND DURATION OF ACTIVITIES

#### Anticipated start date

The drilling operations will commence as soon as possible following contracting of drilling rig and in compliance with restrictions imposed by lease stipulations and/or Conditions of Approval. It is therefore anticipated the access upgrade work and location work would commence on or about August 15, 2008, with a target spud date of September 1, 2008. It is anticipated the drilling phase will require 7 days.

#### Completion

The well pad will be of sufficient size to accommodate all required completion equipment and activities. It is anticipated select intervals will be perforated, stimulated and adequately tested for the presence of commercial hydrocarbons prior to moving uphole to the next prospective test interval. As such, it is anticipated the completion phase will require 45 days.

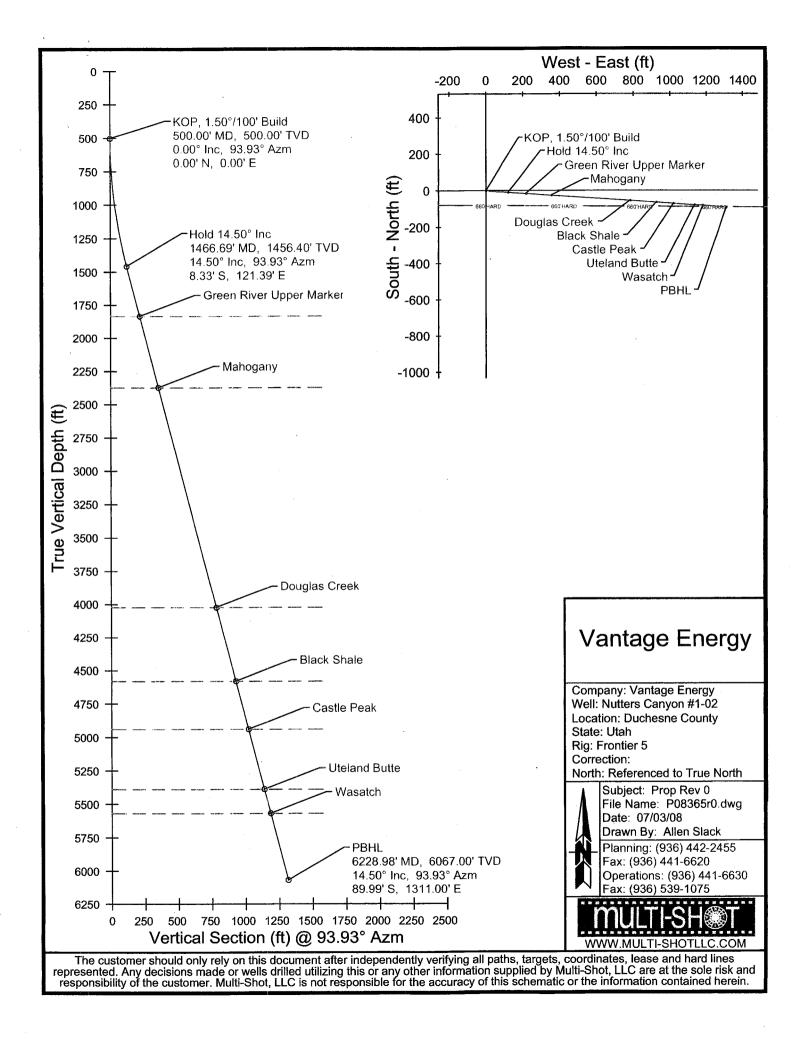
The total project duration is therefore estimated to be <u>52 days</u>, and therefore anticipated to be concluded on or about October 22, 2008.

A string of 2 7/8 inch 6.5 lb/ft. J-55 tubing would be run as the production tubing. A Sundry Notice will be submitted should there be any changes to the proposed completion program.

#### VARIANCE REQUESTS

- 1. Operator requests a variance to *Onshore Oil and Gas Order 2, Item B, No. 1h*, regulations requiring the surface casing be tested to the greater of 1500 psig, or 70% of the minimum internal yield.
  - a. The MASP for this well is calculated to be 1,335 psig, while the 70% yield rating is 2,065 psig.
  - b. Operator therefore requests approval to test the surface casing to the lesser value of 1,500 psig which is greater than the MASP value.
- 2. Operator requests a variance to *Onshore Oil and Gas Order 2, Item A*, regulations which outline test pressures for 3M pressure control systems.

- a. The drilling contractor's standard inventory will consist of 3M pressure control systems; however, as cited above, the MASP for this well is calculated to be 1,430 psig. As such, 2M pressure control equipment is sufficient for the drilling of this well.
- b. Operator therefore requests approval to test contractor's 3M BOPE to 2M pressure system standards. The double ram preventer will be tested to 2,000 psig, and the annular preventer will be tested to 1,500 psig. Safety valves and choke/kill valves and lines will all be tested to 2,000 psig.
- 3. Operator requests a variance to *Onshore Oil and Gas Order 2, Item E*, regulations for air/gas drilling operations. Operator plans to drill only the surface hole to a depth of 350', with a "spud rig", in a separate operation from the drilling rig. No hydrocarbons are present in the surface hole section and therefore, "gas" drilling is not applicable to this hole section. Therefore, for the purpose only of drilling the surface hole with an air rig, Operator requests the following four (4) variances from the order that states "...the following equipment shall be in place and operational during air/gas drilling: (1) properly lubricated and maintained rotating head; (2) blooie line discharge one hundred feet (100') from wellbore; (3) automatic igniter or continuous pilot light on the blooie line; and (4) compressor located...a minimum of 100 feet (100') from the wellbore".
  - a. Operator requests approval to use a diverter bowl rather then a rotating head as specified in the Order. The diverter bowl forces air and cuttings to the reserve pit and is only used to drill the surface hole (to a total depth of 350'). The surface hole section is non-hydrocarbon bearing, and therefore formation pressures will not require a pressure rated rotating head. Should water flows be encountered, they will be reported to the appropriate agencies.
  - b. Operator requests approval to use a blooie line with a discharge length of less than the required one hundred feet (100') from the wellbore in order to minimize the well pad size, and to direct the cuttings into the reserve pit. The wellbore is to be located approximately thirty-five feet (35') from the reserve pit which is to be seventy feet (70') wide. Therefore, a one hundred foot (100') blooie line would blow cuttings across the reserve pit. The requested length of blooie line to drill the surface hole is thirty-five feet (35'). This is the distance necessary to reach the edge of the reserve pit, and to therefore direct cuttings into the reserve pit in a safe and efficient manner.
  - c. Operator requests approval to operate without an automatic igniter or continuous pilot light on the blooie line. The surface hole section is non-hydrocarbon bearing and therefore does not require a continuous ignition source.
  - d. Operator requests approval to use a trailer mounted air compressor located less than one hundred feet (100') from the wellbore in order to minimize the location size. The compressor will be located fifty feet (50') from the wellbore in an opposite direction of the blooie line. The compressor has the following safety features: (1) shut-off valve on the trailer located approximately fifteen feet (15') from the air rig; (2) pressure relief valve on the compressor; and (3) spark arrestors on the motors. The compressor will only be used for the drilling of the surface hole, which is non-hydrocarbon bearing.





Job Number: P08-365

Company: Vantage Energy

Lease/Well: Nutters Canyon #1-02

**Location: Duchesne County** 

Rig Name: Frontier 5

RKB: 12'

G.L. or M.S.L.: 8556'

State/Country: Utah

Declination:

Grid: Referenced to True North

File name: F:\WELLPL~1\2008\P08360'S\P08365\08365.SVY

Date/Time: 03-Jul-08 / 15:56 Curve Name: Prop Rev 0

### WINSERVE SURVEY CALCULATIONS Minimum Curvature Method

Vertical Section Plane 93.93
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

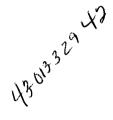
| Measured    | Incl         | Drift            | True              |           |           | Vertical      | CLO            | SURE                                  | Dogleg              |
|-------------|--------------|------------------|-------------------|-----------|-----------|---------------|----------------|---------------------------------------|---------------------|
| Depth<br>FT | Angle<br>Deg | Direction<br>Deg | Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Section<br>FT | Distance<br>FT | Direction<br>Deg                      | Severity<br>Deg/100 |
| KOD 4 50    | 9/400LD      | 91-4             |                   |           |           |               |                |                                       |                     |
| KOP, 1.50   | 7100 Bu      | iia ·            |                   |           |           |               |                |                                       |                     |
| 500.00      | .00          | 93.93            | 500.00            | .00       | .00       | .00           | .00            | .00                                   | .00                 |
| 600.00      | 1.50         | 93.93            | 599.99            | 09        | 1.31      | 1.31          | 1.31           | 93.93                                 | 1.50                |
| 700.00      | 3.00         | 93.93            | 699.91            | 36        | 5.22      | 5.23          | 5.23           | 93.93                                 | 1.50                |
| 800.00      | 4.50         | 93.93            | 799.69            | 81        | 11.75     | 11.77         | 11.77          | 93.93                                 | 1.50                |
| 900.00      | 6.00         | 93.93            | 899.27            | -1.43     | 20.88     | 20.92         | 20.92          | 93.93                                 | 1.50                |
| 1000.00     | 7.50         | 93.93            | 998.57            | -2.24     | 32.60     | 32.68         | 32.68          | 93.93                                 | 1.50                |
| 1100.00     | 9.00         | 93.93            | 1097.54           | -3.22     | 46.92     | 47.03         | 47.03          | 93.93                                 | 1.50                |
| 1200.00     | 10.50        | 93.93            | 1196.09           | -4.38     | 63.81     | 63.96         | 63.96          | 93.93                                 | 1.50                |
| 1300.00     | 12.00        | 93.93            | 1294.16           | -5.72     | 83.27     | 83.47         | 83.47          | 93.93                                 | 1.50                |
| 1400.00     | 13.50        | 93.93            | 1391.70           | -7.23     | 105.29    | 105.54        | 105.54         | 93.93                                 | 1.50                |
| Hold 14.5   | 0° Inc       | ,                |                   |           |           |               |                |                                       |                     |
| 1466.69     | 14.50        | 93.93            | 1456.40           | -8.33     | 121.39    | 121.67        | 121.67         | 93.93                                 | 1.50                |
| Green Riv   | er Upper     | Marker           |                   |           |           |               | ,              |                                       |                     |
| 1854.64     | 14.50        | 93.93            | 1832.00           | -14.98    | 218.30    | 218.81        | 218.81         | 93.93                                 | .00                 |
| Mahogan     | У            |                  | ,                 |           |           |               |                | · · · · · · · · · · · · · · · · · · · |                     |
| 2410.35     | 14.50        | 93.93            | 2370.00           | -24.51    | 357.11    | 357.95        | 357.95         | 93.93                                 | .00                 |
| Douglas (   | Creek        |                  |                   |           |           | 1             |                |                                       |                     |
| 4116.70     | 14.50        | 93.93            | 4022.00           | -53.77    | 783.36    | 785.20        | 785.20         | 93.93                                 | .00                 |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S<br>Distance<br>FT | SURE<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|---------------------------|--------------------------|-------------------------------|
| Black Sha               | ile                  |                           |                           |           |           |                           |                           |                          |                               |
| 4690.99                 | 14.50                | 93.93                     | 4578.00                   | -63.62    | 926.81    | 928.99                    | 928.99                    | 93.93                    | .00                           |
| Castle Pe               | ak                   |                           |                           | 12-464    |           |                           |                           |                          |                               |
| 5061.80                 | 14.50                | 93.93                     | 4937.00                   | -69.98    | 1019.44   | 1021.84                   | 1021.84                   | 93.93                    | .00                           |
| Uteland B               | utte                 |                           |                           |           |           | •                         |                           |                          |                               |
| 5526.61                 | 14.50                | 93.93                     | 5387.00                   | -77.95    | 1135.55   | 1138.22                   | 1138.22                   | 93.93                    | .00                           |
| Wasatch                 |                      |                           |                           |           |           |                           |                           |                          |                               |
| 5712.53                 | 14.50                | 93.93                     | 5567.00                   | -81.13    | 1181.99   | 1184.77                   | 1184.77                   | 93.93                    | .00                           |
| PBHL                    |                      |                           |                           |           |           |                           |                           |                          |                               |
| 6228.98                 | 14.50                | 93.93                     | 6067.00                   | -89.99    | 1311.00   | 1314.09                   | 1314.09                   | 93.93                    | .00                           |



August 13, 2008

Ms. Diana Mason Utah Division of Oil, Gas, and Mining 1594 West North Temple, Ste. 1210 Salt Lake City, Utah 84114



Re: Directional Drilling R649-3-11

Vantage Energy Uinta LLC, Nutters Canyon 1-2 579' FNL, 669' FWL, NW NW Section 2, T7S, R5W, USBM (surface) 660' FNL, 1,980' FWL, NE NW Section 2, T7S, R5W, USBM (bottomhole) Duchesne County, Utah

Dear Ms. Mason.

Pursuant to the filing of Vantage Energy Uinta LLC's (Vantage) Application for Permit to Drill regarding the above referenced well on July 18, 2008, we are hereby submitting this letter in accordance with Oil and Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Vantage's Nutters Canyon 1-2 is an exploratory well located within the Ashley National Forest.
- Vantage is permitting this well as a directional hole in order to minimize surface
  disturbance. The well pad will partially overlie a previously drilled exploratory
  test, the Gulf Oil Antelope Canyon Federal 1. Vantage will reuse a significant
  portion of the original well site disturbed areas for part of the well pad and access
  road.
- Vantage wishes to avoid potential conflict with the previously drilled wellbore, particularly during stimulation operations, by placing the bottomhole location some distance away from the surface location.
- The proposed bottomhole location would allow for future evenly-spaced 40 acre development as the bottomhole coordinates are in the center of the NE NW quarter quarter of the section.

Vantage hereby certifies that it either contractually or otherwise controls 100% working interest within 460 feet of the entire directional well bore and within Section 2 (federal oil and gas lease UTU78242).

AUG 1 4 2008

DIV. OF OIL, GAS & MINING



Should there be any additional information you may require for the evaluation and approval of this request, please contact me at 303-386-8610.

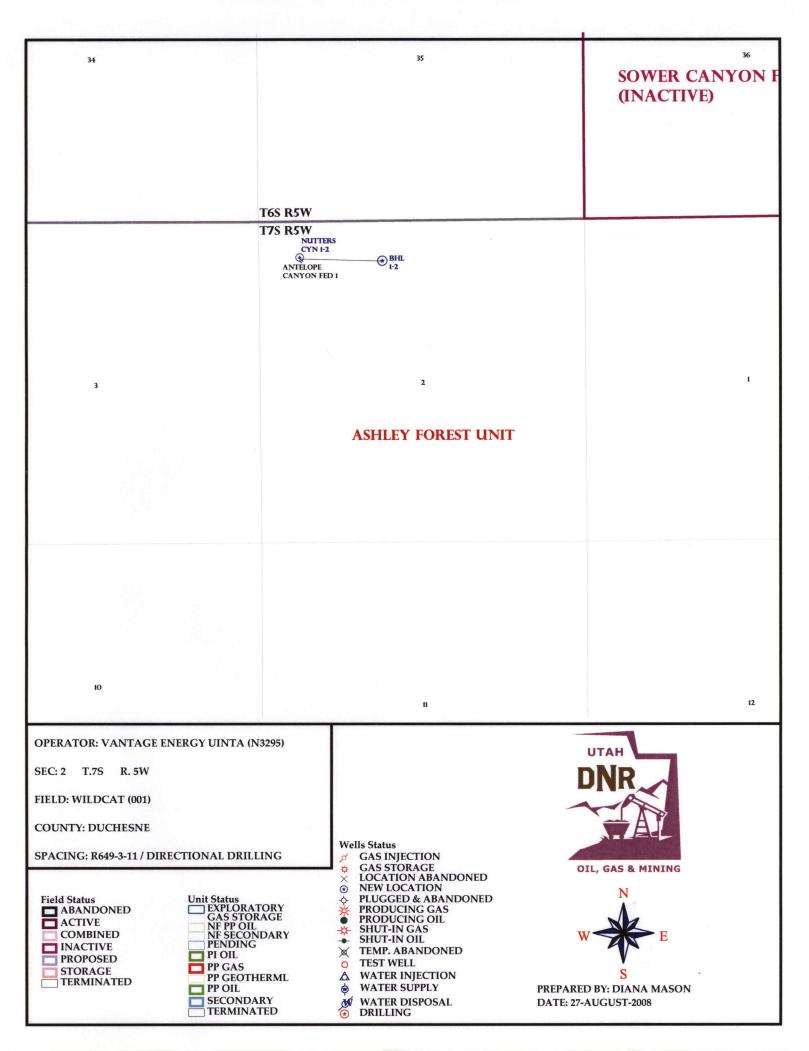
Sincerely,

VANTAGE ENERGY UINTA LLC

John J Moran Jr Senior Engineer

Attachments: Directional Well Plan

Nutters Canyon 1-2



### **United States Department of the Interior**

# BUREAU OF LAND MANAGEMENT Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

September 4, 2008

Memorandum

To:

Assistant District Manager Minerals, Vernal District

From:

Michael Coulthard, Petroleum Engineer

Subject:

2008 Plan of Development Ashley Forest Unit, Duchesne

County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well is planned for calendar year 2008 within the Ashley Forest Unit, Duchesne County, Utah.

API#

WELL NAME

LOCATION

(Proposed TD Wasatch)

43-013-32942 Nutters Canyon 1-2 Sec 2 T07S R05W 0579 FNL 0669 FWL BHL Sec 2 T07S R05W 0660 FNL 1980 FWL

This office has no objection to permitting the well at this time.

/s/ Michael L. Coulthard

bcc:

File – Ashley Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

MCoulthard:mc:9-4-08

#### STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

### **ENTITY ACTION FORM**

Operator:

Vantage Energy Uinta LLC

Operator Account Number: N 3295

Address:

116 Inverness Drive East #107

city Englewood

zip 80112 state CO

Phone Number: (303) 386-8600

Well 1

| API Number  | Well                     | Well Name            |      | Sec      | Twp | Rng | County                         |
|-------------|--------------------------|----------------------|------|----------|-----|-----|--------------------------------|
| 4301334037  | Gilsonite 1-20           |                      | NWNW | 20       | 68  | 3W  | Duchesne                       |
| Action Code | Current Entity<br>Number | New Entity<br>Number | s    | pud Dat  | e   |     | tity Assignment Effective Date |
| А           | 99999                    | 17/18                |      | 9/6/2008 |     | 9   | 7/30/08                        |

Comments: WSTC BHL = NENW

Well 2

| API Number  | Well                     | QQ                   | Sec  | Twp       | Rng | County |                                |
|-------------|--------------------------|----------------------|------|-----------|-----|--------|--------------------------------|
| 4301332942  | Nutters Canyon 1-2       |                      | NWNW | 2         | 78  | 5W     | Duchesne                       |
| Action Code | Current Entity<br>Number | New Entity<br>Number | S    | Spud Date |     |        | tity Assignment Effective Date |
| А           | 99999                    | 17/19                | 9    | 9/18/2008 |     | 9      | 130/08                         |

Comments: WSTC BHL= NWNW

CONFIDENTIAL

Well 3

| API Number  | Well Name                |                      | Number Well Name QQ Sec Tw |                                       | Twp | Rng County  Entity Assignment Effective Date |  |  |
|-------------|--------------------------|----------------------|----------------------------|---------------------------------------|-----|--|--|--|
| Action Code | Current Entity<br>Number | New Entity<br>Number | Spud Date                  |                                       |     |  |  |  |
| omments:    |                          |                      |                            | · · · · · · · · · · · · · · · · · · · |     |  |  |  |

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- Other (Explain in 'comments' section)

RECEIVED **SEP 3 0 2008** 

Mark Rothenberg

Signature Senior Engineer

Title

9/30/08

(5/2000)

Form 3160-5 (August 2007)

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

| F | OR | M   | Α   | PP | RO   | VED  |
|---|----|-----|-----|----|------|------|
| 0 | ΜĘ | 3 N | lo. | 10 | 004- | 0133 |
| _ |    |     |     |    | ~ 1  | 001  |

|                                  | Expires |
|----------------------------------|---------|
| 5. Lease Serial No.<br>UTU-78242 |         |

6. If Indian, Allottee or Tribe Name

| SUNDRY NOTICES AND REPORTS ON WELLS                           |
|---|
| Do not use this form for proposals to drill or to re-enter an |
| abandoned well. Use Form 3160-3 (APD) for such proposals.     |

|  | orm for proposals t<br>Use Form 3160-3 (A           |                    |                     |             |  |   |  |  |
|--|---|--------------------|---------------------|-------------|--|---|--|--|
| SUBMI  | TIN TRIPLICATE Other                                | instructions on p  | page 2.             |             | 7. If Unit of CA/Agreement, Name and/or No.  Ashley Forest Federal Unit UTU-86335X |   |  |  |
| I. Type of Well ☑ Gas W  | ell Other   |                    |                     |             | 8. Well Name and No.<br>Nutters Canyon 1-2   |   |  |  |
| 2. Name of Operator<br>Vantage Energy Uinta LLC  |   |                    |                     |             | 9. API Well No.<br>43-013-32942  |   |  |  |
| Ba. Address  |   | 3b. Phone No. (i   | nclude area code)   |             | 10. Field and Pool or Exploratory Area   |   |  |  |
| 116 Inverness Dr East #107, Englewood, CO 80   | 0112  | (303) 386-8600     | )                   |             | Wildcat  |   |  |  |
| 4. Location of Well <i>(Footage, Sec., T.,</i><br>579' FNL & 669' FWL (NWNW)<br>Sec 2-T7S-R5W 39.907675LAT 110.422119 L                      | R.,M., or Survey Description,<br>ON                 | )                  |                     |             | 11. Country or Parish<br>Duchesne County,  |   |  |  |
| 12. CHEC   | K THE APPROPRIATE BC                                | X(ES) TO INDIC     | ATE NATURE O        | F NOTIC     | E, REPORT OR OTH   | ER DATA   |  |  |
| TYPE OF SUBMISSION   |   |                    | TYPE                | OF ACT      | ION  |   |  |  |
| Notice of Intent  ✓ Subsequent Report  | Acidize Alter Casing Casing Repair Change Plans     |                    |                     | Reco        | uction (Start/Resume) amation mplete porarily Abandon                              | Water Shut-Off  Well Integrity  ✓ Other Drilling Activity |  |  |
| Final Abandonment Notice   | Convert to Injection                                | Plug Ba            | nck [               | ☐ Wate      | r Disposal   |   |  |  |
| testing has been completed. Final determined that the site is ready for the well was spud on 9/19/08.  Enclosed is the Drilling Activity Rep | r final inspection.)<br>ort from 9/18/08 - 9/19/08. |                    | all requirements, ì | ncluding    | reclamation, have been   | n completed and the operator has                          |  |  |
| Mark Rothenberg  | and dollars. Traine (5,5,1111)                      |                    | Title Senior Eng    | ineer       |  |   |  |  |
| Signature Muller   | hul   |                    | Date 9/24/02        | ?           |  |   |  |  |
|  | THIS SPACE  | FOR FEDER          | AL OR STAT          | TE OF       | FICE USE   |   |  |  |
| Approved by  |   |                    |                     |             |  |   |  |  |
| Conditions of approval, if any, are attache hat the applicant holds legal or equitable tentitle the applicant to conduct operations          | itle to those rights in the subje<br>thereon.       | ct lease which wou | ld Office           |             |  | RECEIVED.   |  |  |
| Title 18 U.S.C. Section 1001 and Title 43 fictitious or fraudulent statements or representations.  |   |                    | son knowingly and   | willfully t | o make to any departme   | nt or agency of the United States any false,              |  |  |
|  |   |                    |                     |             |  | <u> </u>  |  |  |

Nutters Canyon 1-2 API: 43-013-32942

Date Activity

9/18/2008 Travel To Location

Drill 40' of 20" Conductoor Holle

Run Conductor Pipe

Cement With 3 Yards Redi Mix

9/19/2008 Rig Up To Dril

Drill 40' to 376' 12.250 Surface Hole

Run Surface Casing: Float Shoe-Shoe Joint-Float Collar-8 Jts 8.652" 24# K55 STC 8rd Exploreco

Rig Release: 9:30

Will Cement In A.M. Soonest Cementers Available

Form 3160-5 (August 2007)

### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

| Hilly                                   |
|---|
| * |

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

5. Lease Serial No. UTU-78242

6. If Indian, Allottee or Tribe Name

|  | form for proposals t<br>Use Form 3160-3 (A   |  |  |   |  |  |
|--|--|--|--|---|--|--|
| SUBMI  | T IN TRIPLICATE – Other  | r instructions on page 2.  |  | 7. If Unit of CA/Agreement, Name and/or No.  Ashley Forest Federal Unit UTU-86335X    |  |  |
| 1. Type of Well  |  |  | Ashley Forest Feder                        |   | U-00333X   |  |
| Oil Well   | /ell Other   |  | 8. Well Name and No.<br>Nutters Canyon 1-2 |   |  |  |
| Name of Operator     Vantage Energy Uinta LLC  |  | 9. API Well No.<br>43-013-32942  |  |   |  |  |
| 3a. Address  |  | 3b. Phone No. (include area co   | ode)                                       | 10. Field and Pool or E   | xploratory A                                     | rea  |
| 116 Inverness Dr East #107, Englewood, CO 80   | (303) 386-8600   |  | Wildcat                                    |   |  |  |
| 4. Location of Well (Footage, Sec., T.,, 579' FNL & 669' FWL (NWNW)<br>Sec 2-T7S-R5W 39.907675LAT 110.422119 L   | , ,  | )  |  | 11. Country or Parish, State<br>Duchesne County, UT                                   |  |  |
| 12. CHEC   | K THE APPROPRIATE BO   | OX(ES) TO INDICATE NATUR   | E OF NOTIO                                 | CE, REPORT OR OTHE  | ER DATA  |  |
| TYPE OF SUBMISSION   |  | TY   | PE OF ACT                                  | TON   |  |  |
| Notice of Intent   | Acidize  | Deepen   | Prod                                       | Production (Start/Resume)   |  | Shut-Off   |
| Notice of Ment   | Alter Casing   | Fracture Treat   | Reci                                       | amation   | Well I   | ntegrity   |
| Subsequent Report  | Casing Repair  | New Construction   | Reco                                       | Recomplete  |  | Drilling Activity  |
| Subsequent Report  | Change Plans Plug and Abandon  |  | Tem:                                       | porarily Abandon  |  |  |
| Final Abandonment Notice   | Convert to Injection   | Plug Back  | ☐ Wate                                     | er Disposal   |  |  |
| 13. Describe Proposed or Completed Of the proposal is to deepen directions. Attach the Bond under which the was following completion of the involvesting has been completed. Final determined that the site is ready for | ally or recomplete horizontal<br>york will be performed or project operations. If the operations and operations are must | lly, give subsurface locations and ovide the Bond No. on file with little to results in a multiple completion results. | l measured an<br>BLM/BIA. Fon or recomp    | nd true vertical depths of<br>Required subsequent repo-<br>pletion in a new interval, | f all pertinent<br>orts must be f<br>a Form 3160 | markers and zones.<br>iled within 30 days<br>-4 must be filed once |

No Activity from 9/19/08 to 10/05/08.

| 14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)  |                                     |  |                      |
|--|-------------------------------------|--|----------------------|
| Mark Rothenberg  | Title Senior Engineer               |  |                      |
| Signature Much Rockerty  | Date 10/6/02                        |  |                      |
| THIS SPACE FOR FED   | ERAL OR STATE OFFI                  | CE USE                                       |                      |
| Approved by  |                                     |  |                      |
|  | Title                               | Date   |                      |
| Conditions of approval, if any, are attached. Approval of this notice does not warrant o that the applicant holds legal or equitable title to those rights in the subject lease which entitle the applicant to conduct operations thereon. |                                     |  |                      |
| Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make it a crime for any  | nerson knowingly and willfully to r | nake to any department or agency of the Unit | ted States any false |

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

RECEIVED

OCT 0 9 2008

Form 3160-5 (August 2007)

## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

5. Lease Serial No. UTU-78242

6. If Indian, Allottee or Tribe Name

|  |   | o drill or to re-enter a PD) for such propos   | an   | ndian, Another of                           | Title Name  |  |
|--|---|--|--|---|---|--|
| SUBMI  | T IN TRIPLICATE – Other   | instructions on page 2.  |  | 7. If Unit of CA/Agreement, Name and/or No. |   |  |
| 1. Type of Well  |   |  |  | Ashley Forest Federal Unit UTU-86335X       |   |  |
| Oil Well 🔽 Gas V   | Vell Other  |  | Nutte  | II Name and No.<br>ers Canyon 1-2           |   |  |
| 2. Name of Operator<br>Vantage Energy Uinta LLC  |   |  | 9. AP<br>43-0  | I Well No.<br>13-32942                      |   |  |
| 3a. Address  |   | 3b. Phone No. (include area  | , , , , , , , , , , , , , , , , , , ,                                  | eld and Pool or Ex                          | xploratory Area   |  |
| 116 Inverness Dr East #107, Englewood, CO 8  | 0112  | (303) 386-8600   | Wildo  | :at   |   |  |
| 4. Location of Well (Footage, Sec., T., 579 FNL & 669 FWL (NWNW) Sec 2-T7S-R5W 39.907675LAT 110.422119 L   | R.,M., or Survey Description, ON  |  | ountry or Parish, S<br>esne County, U                                  |   |   |  |
| 12. CHEC   | CK THE APPROPRIATE BO   | X(ES) TO INDICATE NATU   | RE OF NOTICE, RE   | PORT OR OTHE                                | R DATA  |  |
| TYPE OF SUBMISSION   |   | 7  | YPE OF ACTION  |   |   |  |
| Notice of Intent   | Acidize Alter Casing  | Deepen Fracture Treat  | Production (   | Start/Resume)                               | ☐ Water Shut-Off ☐ Well Integrity                                     |  |
| ✓ Subsequent Report  | Casing Repair   | New Construction   | Recomplete   |   | Other Drilling Activity   |  |
|  | Change Plans  | Plug and Abandon   |  | Temporarily Abandon                         |   |  |
| Final Abandonment Notice  13. Describe Proposed or Completed O   | Convert to Injection  | Plug Back  |  | tter Disposal                               |   |  |
| the proposal is to deepen direction Attach the Bond under which the value of following completion of the involvesting has been completed. Final determined that the site is ready for Submitting Sundry to ammend Sunday See attached details of activity perfections. | work will be performed or proved operations. If the operation Abandonment Notices must be final inspection.)  dry dated 10/6/2008 as we | ovide the Bond No. on file with<br>on results in a multiple comple<br>be filed only after all requirem | n BLM/BIA. Require<br>tion or recompletion i<br>ents, including reclam | d subsequent repo<br>in a new interval,     | orts must be filed within 30 days<br>a Form 3160-4 must be filed once |  |
| 14. I hereby certify that the foregoing is   | true and correct. Name (Printe  | d/Typed)   |  |   |   |  |
| Mark Rothenberg  | 110   | Title Senio  | r Engineer   |   |   |  |
| Signature Mark   | John !  | Date /0/   | 17/08  |   |   |  |

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the Verice fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Nutters Canyon 1-2 API: 43-013-32942

9/20/2008 Cementers Arived On Location

J.S.A.MM. - Rig Up - Pre Operations Meeting

Cement Surface Csg.

Watch Cement Dropped 10' Stopped / Top Of To 4' & Held

9/30/2008 Receive well file and discuss path forward operations for this well. Drive to location and meet with

Rat Hole Drilling crew to discuss rat/mouse hole operations.

Drive to desired rig (Frontier 5) and meet with Tool Pusher about expected rig move dates and rig

move operations.

10/1/2008 Idle

Drill and place pipe in rat and mouse holes.

10/9/2008 Idle

Moving rig onto location. Rig doghouse fell off trailer. Sent to town for repairs.

Idle

10/10/2008 Idle

Rigging up

Idle

Rig repairs should be complete tomorrow afternoon and rig components should be shipped to rig.

10/11/2008 Idle

Break tower. Continue to rig up and wait for water tank, dog house and accumulator.

10/12/2008 Rigging up

Rig up BOP Tester. Conduct BOP Test per APD requirements. Cold weather kept freezing water

Form 3160-5 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

| COM | - Section to the section of the sect |  | And the second | FORM APPROVED<br>OMB No. 1004-0137 |
|-----|--|--|----------------|------------------------------------|
|     | ı  |  |                | Evniror July 21 2016               |

5. Lease Serial No.

|   |  |  |                 |                 | UTU-78242   |  |
|---|--|--|-----------------|-----------------|---|--|
|   | IOTICES AND REPO<br>Form for proposals           |  |                 |                 | 6. If Indian, Allottee or                                       | Tribe Name                               |
| abandoned well.   | Use Form 3160-3 (A                               | APD) for such p                                    | roposals        | <b>3.</b>       |   |  |
| SUBMIT  | T IN TRIPLICATE – Othe                           | r instructions on pag                              | ge 2.           |                 | 7. If Unit of CA/Agreer   |  |
| 1. Type of Well   |  | ****   |                 |                 | Ashley Forest Feder   | al Unit UTU-86335X                       |
| Oil Well  | /ell Other                                       |  |                 |                 | 8. Well Name and No. Nutters Canyon 1-2                         |  |
| 2. Name of Operator<br>Vantage Energy Uinta LLC   |  | ·  |                 | '               | 9. API Well No.<br>43-013-32942                                 |  |
| 3a. Address   |  | 3b. Phone No. (incl.                               | ude area cod    | 'e)             | 10. Field and Pool or E   | xploratory Area                          |
| 116 Inverness Dr East #107, Englewood, CO 80  |  | (303) 386-8600                                     |                 |                 | Wildcat   |  |
| 4. Location of Well (Footage, Sec., T., 1<br>579' FNL & 669' FWL (NWNW)<br>Sec 2-17S-R5W 39.907675LAT 110.422119 L0                 | R.,M., or Survey Description<br>ON               | 1)   |                 |                 | <ol> <li>Country or Parish, S<br/>Duchesne County, U</li> </ol> |  |
| 12. CHEC  | K THE APPROPRIATE BO                             | OX(ES) TO INDICAT                                  | E NATURE        | OF NOTIC        | E, REPORT OR OTHE   | ER DATA                                  |
| TYPE OF SUBMISSION  |  |  | TYP             | E OF ACTI       | ON  |  |
| Notice of Intent  | Acidize  | Deepen Deepen                                      |                 | Produ           | ction (Start/Resume)  | Water Shut-Off                           |
| Alter Casing  |  | Fracture Tr  | reat            | Recla           | mation  | Well Integrity                           |
| Subsequent Report   | Subsequent Report Casing Repair New Construction |  | Recor           | nplete          | Other Drilling Activity   |  |
|   | Change Plans                                     | Plug and A   | bandon          | Temp            | orarily Abandon   |  |
| Final Abandonment Notice  | Convert to Injection                             | Plug Back  |                 | ☐ Water         | Disposal  |  |
| testing has been completed. Final determined that the site is ready for See attached details of activity performance.               | r final inspection.)  ormed 10/13/08 -10/19/08   |  | requirements    | s, including    | reclamation, have been  | completed and the operator has           |
| 14. I hereby certify that the foregoing is t  | rue and correct. Name (Print                     | ed/Typed)  |                 |                 | •   |  |
| Mark Rothenberg   |  | Titl   | e Senior Er     | ngineer         |   |  |
| Signature Mult Ho   | the R  | Dat  | e 10/21         | 108             |   |  |
| eligia (n. 1900).<br>Para de el elegida de guardo (n. 1900).  | AHIS SPACE                                       | FOR FEDERA   | L OR STA        | ATE OFF         | ICE USE   |  |
| Approved by   |  |  | Tielo           |                 |   |  |
| Conditions of approval, if any, are attache that the applicant holds legal or equitable entitle the applicant to conduct operations | title to those rights in the subj                | es not warrant or certify<br>ect lease which would | Title<br>Office |                 | <u>  L</u>  | <u>Date</u>                              |
| Title 18 U.S.C. Section 1001 and Title 43   | U.S.C. Section 1212, make it                     | a crime for any person                             | knowingly an    | ıd willfully to | nake to any department  | or agency of the United States any false |
| fictitious or fraudulent statements or repre  | esentations as to any matter w                   | rithin its jurisdiction.                           |                 |                 | ILVEIVE   |  |

(Instructions on page 2)

OCT 27 2008

10/13/2008 Safety meeting and discuss operations with rig and directional crews.

Pick up BHA. Thaw out mud pumps and circ lines. Drill out casing shoe.

Drilling from 364' to 1806'

10/14/2008 Drilling from 1806 to 3100. MWD tool not receiving signal.

Pump dry pill and pull out of hole to replace MWD tool. Partial loss of returns at 2650', approximately 110 bbls. Loss of returns at 2900', approximately 185 bbls.

10/15/2008 Pull out of hole to change MWD tools.

Change MWD tools. Check tools for proper operation. Run in hole. Orient tools for sliding. Loose returns and pump high vis/low lcm sweep. Drilling from 3,100' to 3,887' MD.

10/16/2008 Drilling from 3,887' to 4,332'.

Troubleshoot MWD problems.

Pull out of hole to replace MWD and Mud Motor.

10/17/2008 Run in hole with new mud motor and new MWD. Test MWD sucessfully. Finish RIH.

Drilling from 4,332' to 4,740'

10/18/2008 Drilling from 4,740' to 5,274'

10/19/2008 Drilling from 5,274' to 5,901'

Form 3160-5 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

| FORM APPROVED          |
|------------------------|
| OMB No. 1004-0137      |
| Expires: July 31, 2010 |

5. Lease Serial No. UTU-78242

6. If Indian, Allottee or Tribe Name

### SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an

| abandoned well.  | Use Form 3160-3 (A                         | APD) for such pi         | roposals.             |  |   |  |
|--|--|--------------------------|-----------------------|--|---|--|
| SUBMIT IN TRIPLICATE – Other instructions on page 2.   |  |                          |                       |  | 7. If Unit of CA/Agreement, Name and/or No. |  |
| 1. Type of Well  |  |                          |                       | Ashley Forest Federal Unit UTU-86335X            |   |  |
| Oil Well Gas   | 8. Well Name and No.<br>Nutters Canyon 1-2 |                          |                       |  |   |  |
| 2. Name of Operator<br>Vantage Energy Uinta LLC  |  |                          |                       | 9. API Well No.<br>43-013-32942                  |   |  |
| 3a. Address  |  | 3b. Phone No. (include   | de area code)         | 10. Field and Pool or E                          | xploratory Area                             |  |
| 116 Inverness Dr East #107, Englewood, CO 80112  |  | (303) 386-8600           |                       | Wildcat  | Wildcat                                     |  |
| 4. Location of Well <i>(Footage, Sec., T.</i><br>579' FNL & 669' FWL (NWNW)<br>Sec 2-T7S-R5W 39.907675LAT 110.422119   | n)   |                          |                       | 11. Country or Parish, State Duchesne County, UT |   |  |
| 12. CHE  | CK THE APPROPRIATE B                       | OX(ES) TO INDICATE       | E NATURE OF NOT       | TICE, REPORT OR OTHE                             | ER DATA                                     |  |
| TYPE OF SUBMISSION   |  |                          | TYPE OF ACTION        |  |   |  |
| Notice of Intent   | Acidize Alter Casing                       | Deepen Fracture Tre      | at Re                 | oduction (Start/Resume)                          | Water Shut-Off Well Integrity               |  |
| Subsequent Report  | Casing Repair                              | New Constru              |                       | ecomplete  | Other Drilling Activity                     |  |
| Final Abandonment Notice   | Change Plans Convert to Injection          | ☐ Plug and Ab☐ Plug Back |                       | mporarily Abandon<br>ater Disposal               |   |  |
| determined that the site is ready for See attached details of activity periods.  Reached TD of 6275' on 10/19/08.  | • ,  | 3.                       |                       |  |   |  |
| 14. I hereby certify that the foregoing is   | true and correct. Name (Print              | ed/Typed)                |                       |  |   |  |
| Mark Rothenberg  |  |                          | Title Senior Engineer |  |   |  |
| Signature Mult Ho  | the his                                    | Date                     | 80/12/08              | ,  |   |  |
|  | THIS SPACE                                 | FOR FEDERAL              | OR STATE O            | FFICE USE  |   |  |
| Approved by  |  |                          |                       |  |   |  |
|  |  |                          | Title                 | D  | Pate  |  |
| Conditions of approval, if any, are attached. Approval of this notice does not warrant or that the applicant holds legal or equitable title to those rights in the subject lease which wentitle the applicant to conduct operations thereon. |  |                          | Office                |  | SECEIVED.                                   |  |
| Title 18 U.S.C. Section 1001 and Title 4.  |  |                          | nowingly and willfull | y to make to any department                      | or agency of the United States any false    |  |

Nutters Canyon 1-2 API: 43-013-32942

10/20/2008 Drilling from 5,901' to 6275'. Reached TD of 6275'

Run High Viscosity Sweep over shaker.

Short trip of 9 stands

Run High Viscosity Sweep over shaker. Spot pill in bottom of hole

Pull out of hole for wireline logs.

Wait on Wireline Truck.

Run wireline logs. Tools could not go past 2,700'

Make wiper trip.

10/21/2008 Make wiper trip.

Circulate and condition hole. Spot gypsum pill at 2,700'.

Pull out of hole for logs.

Rig up wireline truck and run logs. Wireline TD @ 6,260' WLM.

Run in hole to condition hole for casing run.

Condition hole for running casing

Rig up lay down machine.

10/22/2008 Laying down drill string.

Rig up casing crew. Run production casing. Tag up at approximately 6,224' SLM.

Circulate hole. Unable to work casing any lower.

Rig down casing crew. Rig up cement crew. Wait on product to be delivered. Circulate hole.

Pump cement. Loss of returns. Annulus empty. 75 bbls. Into displacement returns established.

Set plug.

Add LCM into annulus and circulate over top of hole. Set slips at 100k string weight.

10/23/2008 Set slips on production casing @ 100k string weight.

Nipple down stack and cut casing off at surface so rig could be moved.

Release rig.

| STATE OF UTAH  | FORM 9   |  |  |  |  |  |
|--|--|--|--|--|--|--|
| DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING  | 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU-78242              |  |  |  |  |  |
| SUNDRY NOTICES AND REPORTS ON WELLS  | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME:                          |  |  |  |  |  |
| Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals. | 7. UNIT OF CA AGREEMENT NAME:<br>Ashley Forest Unit UTU-86335X |  |  |  |  |  |
| 1. TYPE OF WELL OIL WELL GAS WELL OTHER  | 8. WELL NAME and NUMBER Nutters Canyon 1-2                     |  |  |  |  |  |
| 2 NAME OF OPERATOR: Vantage Energy Uinta LLC   | 9. API NUMBER:<br>4301332942                                   |  |  |  |  |  |
| 3. ADDRESS OF OPERATOR: 116 Inverness Dr. East #107 Englewood  | 10. FIELD AND POOL, OR WILDCAT: Wildcat                        |  |  |  |  |  |
| 4. LOCATION OF WELL  | · · ·  |  |  |  |  |  |
| FOOTAGES AT SURFACE: 579' FNL & 669' FWL   | COUNTY: Duchesne   |  |  |  |  |  |
| QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN. NWNW 2 T7S R5W 6  | STATE: UTAH  |  |  |  |  |  |
| 11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPOR  | RT, OR OTHER DATA  |  |  |  |  |  |
| TYPE OF SUBMISSION TYPE OF ACTION  |  |  |  |  |  |  |
| NOTICE OF INTENT DEEPEN  | REPERFORATE CURRENT FORMATION                                  |  |  |  |  |  |
| (Submit in Duplicate) ALTER CASING FRACTURE TREAT  | SIDETRACK TO REPAIR WELL                                       |  |  |  |  |  |
| Approximate date work will start: CASING REPAIR NEW CONSTRUCTION   | TEMPORARILY ABANDON  |  |  |  |  |  |
| CHANGE TO PREVIOUS PLANS OPERATOR CHANGE   | TUBING REPAIR  |  |  |  |  |  |
| CHANGE TUBING PLUG AND ABANDON   | VENT OR FLARE  |  |  |  |  |  |
| SUBSEQUENT REPORT CHANGE WELL NAME PLUG BACK (Submit Original Form Only)   | WATER DISPOSAL   |  |  |  |  |  |
| Date of work completion:  CHANGE WELL STATUS  PRODUCTION (START/RESUME)  | WATER SHUT-OFF   |  |  |  |  |  |
| COMMINGLE PRODUCING FORMATIONS RECLAMATION OF WELL SITE  | OTHER:   |  |  |  |  |  |
| CONVERT WELL TYPE RECOMPLETE - DIFFERENT FORMATION   |  |  |  |  |  |  |
| 12 DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volume   |  |  |  |  |  |  |
| The proposed bottom hole location for the referenced well was 660' FNL, 1,980' FWL, NE N'  | W Section 2, T7S, R5W.   |  |  |  |  |  |
| The actual bottom location acheived is 682' FNL, 1,949' FWL, NE NW Section 2, T7S, R5W.  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Enclosed is the directional letter updating the actual bottom hole location.   |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 549853X Accepted by the  |  |  |  |  |  |  |
| him. Accepted by the   | हरी है ।<br>   |  |  |  |  |  |
| 44174297 Utah Division of  | H · · · · · · · · · · · · · · · · · · ·                        |  |  |  |  |  |
| 39, 907370 Oil, Gas and Mining   |  |  |  |  |  |  |
| Date: 1\-05-65   |  |  |  |  |  |  |
| -110. 416 768 By: # 2001   |  |  |  |  |  |  |
| Dy. Description  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| NAME (PLEASE PRINT) John Moran Senior Engineer   |  |  |  |  |  |  |
|  | 1/00   |  |  |  |  |  |
| SIGNATURE DATE 11/4  | 108  |  |  |  |  |  |
| This space for State use only)   |  |  |  |  |  |  |

COPY SENT TO OPERATOR

Date: 11.6.2008
Initials: 145

11.



November 3, 2008

Ms. Diana Mason Utah Division of Oil, Gas, and Mining 1594 West North Temple, Ste. 1210 Salt Lake City, Utah 84114

Re: Directional Drilling R649-3-11

Vantage Energy Uinta LLC, Nutters Canyon 1-2 579' FNL, 669' FWL, NW NW Section 2, T7S, R5W, USBM (surface) 682' FNL, 1,949' FWL, NE NW Section 2, T7S, R5W, USBM (bottomhole) Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Vantage Energy Uinta LLC's (Vantage) Application for Permit to Drill regarding the above referenced well on July 18, 2008, we are hereby submitting this letter in accordance with Oil and Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Vantage's Nutters Canyon 1-2 is an exploratory well located within the Ashley National Forest.
- Vantage is permitting this well as a directional hole in order to minimize surface disturbance. The well pad will partially overlie a previously drilled exploratory test, the Gulf Oil Antelope Canyon Federal 1. Vantage will reuse a significant portion of the original well site disturbed areas for part of the well pad and access road.
- Vantage wishes to avoid potential conflict with the previously drilled wellbore, particularly during stimulation operations, by placing the bottomhole location some distance away from the surface location.
- The proposed bottomhole location would allow for future evenly-spaced 40 acre development as the bottomhole coordinates are in the center of the NE NW quarter quarter of the section.

Vantage hereby certifies that it either contractually or otherwise controls 100% working interest within 460 feet of the entire directional well bore and within Section 2 (federal oil and gas lease UTU78242).



Should there be any additional information you may require for the evaluation and approval of this request, please contact me at 303-386-8610.

Sincerely,

VANTAGE ENERGY UINTA LLC

John J Moran Jr Senior Engineer

### **UNITED STATES** DEPARTMENT OF THE INTER **BUREAU OF LAND MANAGEM**

|   |  | ,   |  |  |                                  |
|---|--|---|--|--|----------------------------------|
| B<br>SUNDR<br>Do not use th   | UNITED STATE<br>DEPARTMENT OF THE<br>UREAU OF LAND MAN<br>Y NOTICES AND REPO<br>is form for proposals:<br>II. Use Form 3160-3 (A   | OI OI   | DRM APPROVED MB No. 1004-0137 pires: July 31, 2010  Tribe Name       |  |                                  |
| SUI   | BMIT IN TRIPLICATE - Othe  | r instructions on page  | 2.   | 7. If Unit of CA/Agree   | -                                |
| 1. Type of Well   |  |   |  |  | ral Unit UTU-86335X              |
| Oil Well 🗸 G  | as Well Other  |   |  | 8. Well Name and No. Nutters Canyon 1-2  |                                  |
| Name of Operator     Vantage Energy Uinta LLC   |  | , , , , , , , , , , , , , , , , , , ,   |  | 9. API Well No.<br>43-013-32942  |                                  |
| 3a. Address   | and the second s | 3b. Phone No. (include  | e area code)   | 10. Field and Pool or E  | xploratory Area                  |
| 116 Inverness Dr East #107, Englewood, 6  | CO 80112   | (303) 386-8600  |  | Wildcat  |                                  |
| 4. Location of Well (Footage, Sec. 579' FNL & 669' FWL (NWNW)                                     | , T.,R.,M., or Survey Description  | 1)  |  | 11. Country or Parish,   | State                            |
| Sec 2-T7S-R5W 39.907675LAT 110.422  | 119 LON  |   |  | Duchesne County, U   | Т                                |
| 12. C   | HECK THE APPROPRIATE BO  | OX(ES) TO INDICATE  | NATURE OF NOTION   | CE, REPORT OR OTHE   | R DATA                           |
| TYPE OF SUBMISSION  |  |   | TYPE OF ACT  | TION   |                                  |
| Notice of Intent  | Acidize Alter Casing   | Deepen Fracture Trea  | =  | luction (Start/Resume) amation   | Water Shut-Off Well Integrity    |
| Subsequent Report   | Casing Repair Change Plans   | New Construction  Plug and Aba  |  | omplete<br>porarily Abandon  | Other Completion Activity        |
| Final Abandonment Notice  | Convert to Injection   | Plug Back   | ☐ Wate   | er Disposal  |                                  |
| the proposal is to deepen direct<br>Attach the Bond under which<br>following completion of the in | tionally or recomplete horizonta<br>the work will be performed or pr<br>volved operations. If the operat<br>inal Abandonment Notices must  | lly, give subsurface local<br>ovide the Bond No. on f<br>ion results in a multiple of | tions and measured a<br>file with BLM/BIA. I<br>completion or recomp | nd true vertical depths of<br>Required subsequent repo<br>pletion in a new interval, | a Form 3160-4 must be filed once |
| Enclosed is the Completion Acti   | vity Report from 10/23/08 to   | 11/9/08.  |  |  |                                  |
|   |  |   |  |  |                                  |
|   |  |   |  |  |                                  |
|   |  |   |  |  |                                  |
|   |  |   |  |  |                                  |
|   | •  |   |  |  |                                  |
|   |  |   |  |  |                                  |
|   |  |   |  |  |                                  |
|   |  |   |  |  |                                  |

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) Title Senior Engineer Mark Rothenberg Signature THIS SPACE FOR FEDERAL OR STATE OFFICE USE Approved by Title Date Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would Office entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Nutters Canyon 1-2 API: 43-013-32942

10/23/2008 Safety Meeting, Review JSA

Spot Opsco Energy flow bacj equip, Spot Dalbo flow back tank, Weld on Wellhead Inc 7 1/16" 5k wellhead w/ 5k gate wing valves on CSG

10/24/2008 Safety Meeting, Review JSA

Blade loc, spot in oil tank and install stairs, Haul off Drlg mud from 3- 400bbl uprights on loc, Spot 2 clean 400bbl tanks in place f/ frac, NU 7 1/6" dbl gate BOPs w/ 2 sets of blinds, Hook up kummy and function test ok

10/25/2008 Safety Meeting, Reviiew JSA w/ Action Hot Oil

Perolog WL lost in field, Went to guide to loc Safety Meeting, Reviiew JSA w/ all personel

Spot in and RU Perolog WL, MU and RIH w/ 4.75" GR/ Junk Basket and tag at 6129' WLM, POH LD tools, MU and PU CCL Gama and CBL RIH to 6129' POH logging, LD tools, RD and release Perfolog WL

PSI test CSG and BOPs to 4500 Psi f/ 15 mins OK, RD and release Hot Oiler

10/26/2008 Wait on 2- 500bbl tanks to arrive from rocksprings WY, Spot in tanks, Haul in 1 load of 2% kcl, 2 frac tanks are full

10/27/2008 Safety Meeting, Review JSA

Spot in 2-500 bbl tanks f/ storage during flow back, respot flow back tank

10/28/2008 Spot 1 more 400bbl upright, Total of 5 400bbl frac tanks, 2 are full of 2% kcl

10/29/2008 Safety Meeting, Review JSA

RU Opsco Energy lines and hoses To well, Flow back, Storage and Oil tanks, Cont to haul in 2% kcl frac fluid, Note: 5- 400bbl tanks will be full today

10/30/2008 Safety Meeting, Review JSA

Haul in and off load 223 jts 2 7/8", 6.5#, J55, R2, EUE, Note: 5- 400bbl Frac tanks full of 2% kcl frac fluid

10/31/2008 Safety Meeting, Review JSA

Heat 5 frac tanks to 125\* Due to may not be able to aquire Action Hot Oil unit f/ 2 weeks, Cont to prep f/ frac

11/1/2008 Cont to prep f/ Frac, Note BWWC has ordered all Comp Equip needed f/ entire job, It will be at there shop in AM

11/2/2008 Safety Meeting, Review JSA

Spot in and RU Action Hot Oil unit, Heat 5- 400 bbl frac tanks to 125\*, Cont to Prep f/ frac

**Nutters Canyon 1-2** API: 43-013-32942

11/3/2008 Safety Meeting, Review JSA

Line up 4 more 400 bbl frac tanks, Cont to prep f/ frac

11/4/2008 Safety Meeting, Review JSA

Haul in and spot 4- 400 bbl frac tanks from Gisonite 1-20, MI and spot air heater

11/5/2008 Safety Meeting, Review JSA

> Haul in and off load 6 loads 2% kcl frac fluid, Tarp in Well head and Ru air heater, Spot and Fill 5 C02 vessels, Off load 8- 12x12 Seals off Roustabouts truck f/ tbg when spot tbg racks f/ Rig

11/6/2008 Safety Meeting, Review JSA

> Perfolog CBL/CCL/Gamma Ray log DTD 10/25/08, Perf 5562-5712' OA w/ Owens 311T w/ 21 grams chgs, 120\* phasing, .035 holes, Shoot a total of 44\_.035" Entry holes, All shots fired OK, POH LD tools. RD and release BWWC.

Cont to RU Opsco and haul in 2% Frac fluid

Safety Meeting, Review JSA w/ all personel, Spot in and RU R&S Well Service Rig, Guy out, RU

work floor, SHDN til AM

Ops SHDN til AM

11/7/2008 Safety Meeting, Review JSA w/ all personel

> Move Tbg from racks to seals, Spot Tbg racks and Cat walk, Move Tbg from seals to Racks, Prep and Tally 170 Jts 2 7/8" J-55, Note: Total Jts on loc= 223

PU 1 Jt, MU XN Nipple, PU 163 Jts, EOT at 5103' kbm, RU swab equip, Haul in 6 more 400 bbl

Frac tanks and begin filling, heat full tanks to 140\*, SWI Secure.

Ops Shdn til am

11/8/2008 Safety Meeting, Review JSA

PU Swab equip, Tag fluid at surface, Make 22 Swab runs total, Swab down to 5000', Total fluid

recovered= 91 bbl, Wait 30 mins and RIH did not tag fluid, Note: did not cut any Oil or Gas

Drain up lines OPS Shdn til AM

11/9/2008 Safety Meeting Review JSA

> RIH w/ Swab, Tag at 4950' POH, Sample contained a trace of oil, RD Swab equip, LD 14 Jts, TOH w/ 75 stands, Change Bop rams back to Blinds, Move Tbg racks and Cat walk, Winterize, Cont to

prep f/ Frac, MI and Spot HES Sand Master, Wait on Frac crew

Ops Shdn til Am

Form 3160-5 (August 2007)

### **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

| FORM APPROVED          |
|------------------------|
| OMB No. 1004-0137      |
| Expires: July 31, 2010 |

5. Lease Serial No. UTU-78242

| Do not use this   |   | or is on wells<br>o drill or to re-enter a<br>PD) for such proposa | n                | 6. If Indian, Allottee or  | r Tribe Name                      |
|---|---|--|------------------|--|-----------------------------------|
| SUBMI   | T IN TRIPLICATE - Other   | instructions on page 2.  |                  | _  | ment, Name and/or No.             |
| 1. Type of Well   |   |  |                  | Ashley Forest Fede   | ral Unit UTU-86335X               |
| Oil Well 🕢 Gas V  | Vell Other  |  |                  | <ol><li>Well Name and No.<br/>Nutters Canyon 1-2</li></ol>         |                                   |
| 2. Name of Operator<br>Vantage Energy Uinta LLC   | -   |  |                  | 9. API Well No.<br>43-013-32942                                    |                                   |
| 3a. Address   |   | 3b. Phone No. (include area c                                      | ode)             | 10. Field and Pool or E  | xploratory Area                   |
| 116 Inverness Dr East #107, Englewood, CO 8   |   | (303) 386-8600   |                  | Wildcat  |                                   |
| 4. Location of Well (Footage, Sec., T., 579' FNL & 669' FWL (NWNW)<br>Sec 2-17S-R5W 39.907675LAT 110.422119 L                             | R.,M., or Survey Description)<br>ON                             |  |                  | <ol> <li>Country or Parish,</li> <li>Duchesne County, U</li> </ol> |                                   |
| 12. CHEG  | CK THE APPROPRIATE BO   | X(ES) TO INDICATE NATUR  | RE OF NOTIC      | E, REPORT OR OTHE  | ER DATA                           |
| TYPE OF SUBMISSION  |   | T  | YPE OF ACTI      | ON   |                                   |
| Notice of Intent  | Acidize Alter Casing  | Deepen Fracture Treat  |                  | ction (Start/Resume)   | ☐ Water Shut-Off ☐ Well Integrity |
| ✓ Subsequent Report   | Casing Repair   | New Construction   | Recor            | nplete   | Other Completion Activity         |
| Subsequent Report   | Change Plans  | Plug and Abandon   | Temp             | orarily Abandon  |                                   |
| Final Abandonment Notice  | Convert to Injection  | Plug Back  | ☐ Water          | Disposal   |                                   |
| determined that the site is ready for Enclosed is the Weekly Completion   | Activity Report from 11/10                                      |  |                  |  |                                   |
| 14. I hereby certify that the foregoing is  | true and correct. Name (Printed                                 | d/Typed)   |                  |  |                                   |
| Mark Rothenberg   |   | Title Senior   | Engineer         |  |                                   |
| Signature Mark H  | the (1)   | Date ///7  | 108              |  |                                   |
|   | THIS SPACE  | FOR FEDERAL OR S   | TATE OFF         | ICE USE  |                                   |
| Approved by   |   |  |                  | T  |                                   |
|   |   | Title  |                  |  | Date                              |
| Conditions of approval, if any, are attache<br>that the applicant holds legal or equitable<br>entitle the applicant to conduct operations | title to those rights in the subjec                             |  |                  |  |                                   |
| Title 18 U.S.C. Section 1001 and Title 43 fictitious or fraudulent statements or repr   | U.S.C. Section 1212, make it a esentations as to any matter wit | crime for any person knowingly hin its jurisdiction.               | and willfully to | make to any departmen  | ECENTED tates any false           |

Nutters Canyon 1-2 API: 43-013-32942

### 11/10/2008 Safety meeting, Review JSA

Wait on HES, Cont to prep f/ Frac, Begin to heat trace and insulate flow back and Oil lines.

### 11/11/2008 Safrty Meeting, Review JSA

Cont to Prep f/ Frac, Wait on Halliburton Energy Services

### 11/12/2008 Safety Meeting, Review JSA

NU 7 1/16" 5k Frac valve, RU Work floor to proper height, Repair and Prep Rig pump f/ Drlg out Wait on HES to Arrive

Spot in and RU HES Pumps and lines

**OPS SHDN til AM** 

### 11/13/2008 Safety Meeting Review JSA

Prime up pumps, PSI test HES pumps and lines to 5000 psi OK, Shell test Frac valve and Opsco's line to 3000 psi OK, Check Chems at Blender, Prime up CO2 pumps

Frac stage 1 as per Procedure

Perfolog CCL/CBL/GR Log dtd 10/25/08, Set CBP at 5540' Log off CBP set OK, Correlate and Perf Castle Peak at 5521-23' w/ Owens 311T w/ 21 grm,chgs, 120\* phasing, Shoot 8\_.35" entry holes, Could not read meter to determine if guns were fireing, Attempt to Perf 5481-83' Gun did not fire, POH

Break Lub and LD tools, Top Gun was wet due to O-Ring failure, Repair, Still could not obtain, Continuity Re-head Cable Head, Still w/ no Continuity, Road meet w/ BWWC Rosevelt UT, wait on different fireing panel, (Release HES f/ night)

Replace fireing panel, RIH w/ 3 1/8" Owens Perf gun w/ Dual fire subs, Correlate to Perfolog CCL/CBL/GR Log dtd 10/25/08, Perf Castle Peak at 5483-85', 5404-08', 5381-83' w/ Owens 311T w/ 21 grm chgs, 120\* phasing, Shoot 16\_.35 entry holes, POH, All shots fired OK, Winterize equip OPS SHDN til AM

### 11/14/2008 Safety Meeting, Review JSA w/ all Personel, Prep Loc f/ Frac and Wireline

SICP= 500 psi, MU HES Frac lines, Psi test to 5000 psi OK, Start Chems at Blender, Prime up all pumps

Frac Stg 2 as per Procedure

CCL/CBL/GR Log dtd 10/25/08, Set CBP at 5150' Log off CBP set OK, Correlate and Perf Castle Peak/Black Shale at 4986-88', 5004-06', 5036-42', 5072-74', 5081-83', 5106-10' w/ Owens 311T w/ 21 grm,chgs, 120\* phasing, Shoot 36\_.35" entry holes, Note: POH after 1st shot due to broken wire repair and cont to Perf Stage 3, POH LD tools

Frac Stg 3 as per Procedure

CCL/CBL/GR Log dtd 10/25/08, Set CBP at 4950' Log off CBP set OK, Correlate and Perf Black Shale at 4752-54', 4793-95', 4826-28', 4882-84', 4910-12' w/ Owens 311T w/ 21 grm,chgs, 120\* phasing, Shoot 20\_.35" entry holes, Note: POH

Frac Stg 4 as per Procedure

RD HES pumps and lines

SICP=900 psi, Open well to flow back tank on 16/64 pos Chk f/ 9 hrs Psi down to 400#, Open up to a 48/64 Chk, At 0600 hrs Fcp= 500#, Flow Back 130 bbl w/ good trace of Oil

Nutters Canyon 1-2 API: 43-013-32942

11/15/2008 Flow Well, Chk= 1", Fcp= 490 psi w/ a trace of Oil w/ Well Gas to surface, Specific gavity= 0.924, API= 21.7 at 60\*

Safety Meeting Review JSA

MU and RIH w/ Kill Plug, BOT 7k CBP, Correlate to Perfolog CBL/CCL/GR log dtd 10/25/08, Set CBP at 4650', Log off CBP set OK, POH, RD and release BWWC

Bleed off Well, ND Frac Y and 7" frac valve, Note: Could not Fill well w/ 2% Kcl due to HES Equip obstructing Rig Pump, Frac tanks and Rig, HES did not arrive on Loc til 1500 hrs to begin moving Equip

Prep Work Floor to TIH w/ Tbg, MU BHA, Smith 4 3/4" Rock bit, Weatherford 2 7/8" Pump open Bit sub w/ Dart in sub, TIH w/ 164 Jts, Bit at 4627' kbm

Swi Secure, Assist Halliburton to complete RD and move off Loc OPS Shdn til am

### 11/16/2008 Safety Review JSA

RD Tbg equip and work floor, NU Annular BOP and Spool w/ Bleed off valve MU pump lines, Hang Kelly hose, PU and RU P-swivel, Spot Tbg racks ,Cat walk and Tbg, Move 2-400 bbl uprights f/ Drlg out, Haul in 1 load and Transfer consolidated 2% ckl water to Pump tanks, Load out 1 load flow back, Assist Halliburton moving sand from Sand Master Ops Shdn til AM

Form 3160-5 (August 2007)

### **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

SUNDRY NOTICES AND REPORTS ON WELLS

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

5. Lease Serial No. UTU-78242

6. If Indian, Allottee or Tribe Name

|  |  | to drill or to re-enter a<br>NPD) for such proposa |            |  |   |
|--|--|--|------------|--|---|
| SUBM   | IT IN TRIPLICATE – Othe                | r instructions on page 2.                          |            |  | ement, Name and/or No.                        |
| 1. Type of Well  |  |  |            | Ashley Forest Fede                           | eral Unit UTU-86335X                          |
| Oil Well Gas Well Other  |  |  |            | 8. Well Name and No. Nutters Canyon 1-2      |   |
| 2. Name of Operator<br>Vantage Energy Uinta LLC  |  |  |            | 9. API Well No.<br>43-013-32942              |   |
| 3a. Address  | ************************************** | 3b. Phone No. (include area c                      | ode)       | 10. Field and Pool or I                      | Exploratory Area                              |
| 116 Inverness Dr East #107, Englewood, CO 8  | (303) 386-8600                         |  | Wildcat    |  |   |
| 4. Location of Well (Footage, Sec., T. 579 FNL & 669 FWL (NWNW)<br>Sec 2-17S-R5W 39.907675LAT 110.422119 | •                                      | i)   |            | 11. Country or Parish,<br>Duchesne County, U |   |
| 12. CHE  | CK THE APPROPRIATE BO                  | OX(ES) TO INDICATE NATU                            | RE OF NOTI | CE, REPORT OR OTH                            | ER DATA                                       |
| TYPE OF SUBMISSION   |  | T  | YPE OF AC  | LION   |   |
| Notice of Intent   | Acidize                                | <b>П</b> Dеереп                                    | Proc       | luction (Start/Resume)                       | Water Shut-Off                                |
| Notice of Intent   | Alter Casing                           | Fracture Treat                                     | Rec        | lamation                                     | Well Integrity                                |
| Subsequent Report  | Casing Repair                          | New Construction                                   | Rec        | omplete                                      | Other Completion Activity                     |
| Subsequent Report  | Change Plans                           | Plug and Abandon                                   |            | Temporarily Abandon                          |   |
| Final Abandonment Notice   | Convert to Injection                   | Plug Back  |            | er Disposal                                  | <b>3</b> 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| 13. Describe Proposed or Completed C<br>the proposal is to deepen direction                              |  |  |            |  |   |

Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has

Enclosed is the Weekly Completion Activity Report from 11/22/08 to 11/30/08.

determined that the site is ready for final inspection.)

| 14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)   |                           |  |
|---|---------------------------|--|
| Mark Rothenberg   | e Senior Engineer         |  |
| Signature Munk School Date  | 12/1/08                   |  |
| THIS SPACE FOR FEDERA   | L OR STATE OF             | FICE USE   |
| Approved by   |                           |  |
|   | Title                     | Date   |
| Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. | Office                    | PECEIVED   |
| Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person fictitious or fraudulent statements or representations as to any matter within its jurisdiction.  | knowingly and willfully t | o make to any department or agency of the United States any false, |

(Instructions on page 2)

11/22/2008 Safety Meeting, Review JSA

Sicp= 400 psi bleed off, Tih EOT at 5729' Kbm 183 total jts in, Break Circ, Pump w/ Graco Foam Air unit only pumping 3 gals/ min fluid to Produce foam w/ good returns, TBR from Frac= 800 Kill Tbg w/ 10 bbl, TOH w/ 50 jts, Wellhead and Flow Back Plugged w/ heavy oil Weel building Psi, Flow Back crew and Rig crew break and clear lines and Wellhead

11/23/2008 Safety Meeting, Review JSA

Sicp= 425 blow down, TOH w/ Mill

RD P-Swivel, Tbg equip, Work floor, ND Annular BOP, RU Work floor and Tbg equip MU Prod BHA: Tapped Bull plug, 2 Jts, 2 Perf Tbg Subs, Seat Nipple, 10 Jts, Stack out on Solidified Oil, Could not work thru, POH w/ BHA, Hot Oil Csg in am WSI Til AM

11/24/2008 Safety Meeting, Review JSAs

Spot in and RU Action Hot Oiler, Pump 110 bbl 170\* 2% Kcl water down CSG to Clear obstruction 149 Jts, Land Tbg Hanger in 15,000# tension, MU 7"- 5K- 2 7/8" Flange, MU Pumping T assm w/ pumping unit plate in place

Rih w/ Pump and Rods as follows, Dip tube, Pump, 4 K-Bars, 157- 3/4 rods, 33- 7/8 rods, Swi Secure

OPS SHDN til AM

11/25/2008 Safety Meeting, Review JSA

Cont RIH w/ 7/8" rods, total rods= 4- K Bars, 157- 3/4, 69- 7/8" Guided rods, Space out w/ 1- 10', 1- 4' sub, MU 26' Polish rod Seat Pump, Psi test to 500#, Stroke pump w/ Rig up to 1000# OK RD R&S Service Rig, Spot in Opsco line heater and Western Petroleum 1000 gal Propane tank f/ Unit

RU Weatherford Hydraulic Pumping unit, Spot scrubber, Repair wiring on unit Fire up unit and begin to pump fluid, TBR in 14 hrs= 66 bbl, Samples contain Water and Foam

11/26/2008 Safety Meeting, Review JSA, Avg B/H= 7.5, Bbl Recovered in 24 hrs= 103

11/27/2008 Safety Meeting, Review JSA, Avg B/H= 8.4, TBR in 24 hrs= 200.6

11/28/2008 Safety Meeting, Review JSA, Avg B/H= 8.9, TBR in 24 hrs= 213.4

11/29/2008 Safety Meeting, Avg B/H= 9.5, TBR in 24 hrs= 228.5, Maintain 400 psi on CSG, Fluid sample contains foam, Frac fluid w/ 50% C02

11/30/2008

Safety Meeting, Review JSA, Avg B/H= 9.4, TBR in 24 hrs= 218, C02= 35%, TBR from frac= 2,883

Form 3160-5 (August 2007)

**UNITED STATES** DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

| 5. | Lease   | Serial | No. |
|----|---------|--------|-----|
| ľ  | TI 1-78 | 242    |     |

6. If Indian, Allottee or Tribe Name

| SUNDRY          | NOTICES AND REPORTS ON WELLS                  |
|-----------------|---|
| Do not use this | form for proposals to drill or to re-enter an |
| abandanad wall  | Has Form 2460 2 /ADDI for such proposals      |

|  | form for proposals (<br>Use Form 3160-3 (A                   |               |                          | ; <b>.</b>  |  |                               |
|--|--|---------------|--------------------------|-------------|--|-------------------------------|
| SUBMI  | T IN TRIPLICATE - Other                                      | r instructio  | ns on page 2.            |             | 1  | ement, Name and/or No.        |
| 1. Type of Well  |  |               |                          |             |  | eral Unit UTU-86335X          |
| Oil Well Gas Well Other  |  |               |                          |             | 8. Well Name and No<br>Nutters Canyon 1-2  |                               |
| Name of Operator Vantage Energy Uinta LLC  |  |               |                          |             | 9. API Well No.<br>43-013-32942            |                               |
| 3a. Address  |  | 3b. Phone     | No. (include area coa    | e)          | 10. Field and Pool or                      | Exploratory Area              |
| 116 Inverness Dr East #107, Englewood, CO 8  |  | (303) 386     | 6-8600                   |             | Wildcat                                    |                               |
| 4. Location of Well <i>(Footage, Sec., T.,</i> 579 FNL & 669 FWL (NWNW)<br>Sec 2-T7S-R5W 39.907675LAT 110.422119 L                   | R.,M., or Survey Description  ON                             | i)            |                          |             | 11. Country or Parish,<br>Duchesne County, |                               |
| 12. CHEC   | CK THE APPROPRIATE BO  | OX(ES) TO     | INDICATE NATURE          | OF NOT      | ICE, REPORT OR OTH                         | ER DATA                       |
| TYPE OF SUBMISSION   |  |               | TYI                      | E OF AC     | CTION                                      |                               |
| Notice of Intent   | Acidize Alter Casing   |               | Deepen<br>Fracture Treat |             | oduction (Start/Resume)                    | Water Shut-Off Well Integrity |
| Subsequent Report  | Casing Repair  |               | New Construction         | Re          | complete                                   | Other Completion Activity     |
| _  | Change Plans   | _             | Plug and Abandon         | _           | mporarily Abandon                          |                               |
| Final Abandonment Notice   | Convert to Injection   |               | Plug Back                | Ш Wa        | nter Disposal                              |                               |
| determined that the site is ready fo<br>Enclosed is the Weekly Completion  | •  | 1/08 to 12/   | 07/08.                   |             |  |                               |
| 14. I hereby certify that the foregoing is t   | rue and correct. Name (Printe                                | ed/Typed)     |                          |             |  |                               |
| Mark Rothenberg  | 11   |               | Title Senior Er          | gineer      |  |                               |
| Signature Thurston   | the f  |               | Date 12/8/               | 08          |  |                               |
|  | THIS SPACE   | FOR FE        | DERAL OR STA             | ATE O       | FFICE USE                                  |                               |
| Approved by  |  |               |                          |             |  |                               |
|  | 7-7  | ,             | Title                    |             |  | Date                          |
| Conditions of approval, if any, are attache that the applicant holds legal or equitable tentitle the applicant to conduct operations | title to those rights in the subje                           |               |                          |             |  |                               |
| Title 18 U.S.C. Section 1001 and Title 43 fictitious or fraudulent statements or representations.                                    | U.S.C. Section 1212, make it esentations as to any matter wi | a crime for a | ny person knowingly an   | d willfully | to make to any department                  | CEIVED States any false,      |

Nutters Canyon 1-2 API: 43-013-32942

12/1/2008 Safety Meeting, Review JSA,

Prod Testing as follows: Avg B/H= 8.9, TBR in 24 hrs= 214.1, Csg open to tank, C02 at 0500hrs= 36%, Avg pump strokes /min= 6, Total bbls left to recover from frac and all fluid loss= 2897

12/2/2008 Safety meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 8.0, Tbr in 24 hrs= 203, Csg open, C02 at 0500hrs= 34%

12/3/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 8.8, Tbr in 24 hrs= 210, Csg open, C02 at 0500hrs= 29%

12/4/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 8.7, Tbr in 24 hrs= 209.5, Csg open, C02 at 0500hrs= 27%

12/5/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 8.5, Tbr in 24 hrs= 204, Csg open, C02 at 0500hrs= 28%

12/6/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 9, Tbr in 24 hrs= 205, Csg open, C02 at 0500hrs= 28%

12/7/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 9, Tbr in 24 hrs= 214.1, Csg open, C02 at 0500hrs= 28%

Form 3160-5 (August 2007)

### **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

SUNDRY NOTICES AND REPORTS ON WELLS

| FORM A          | PPROVED     |
|-----------------|-------------|
| OMB No          | . 1004-0137 |
| Position of the | 21 201/     |

Expires: July 31, 2010

5. Lease Serial No. UTU-78242

6. If Indian, Allottee or Tribe Name

CONFIDENTIAL

|  |                         | to drill or to re-enter a<br>NPD) for such proposa |             | ŕ  |              |                           |
|--|-------------------------|--|-------------|--|--------------|---------------------------|
|  | T IN TRIPLICATE - Other | r instructions on page 2.                          |             | 7. If Unit of CA/Agree Ashley Forest Feder     | -            |                           |
| 1. Type of Well  |                         |  |             | 8. Well Name and No.<br>Nutters Canyon 1-2     |              |                           |
| 2. Name of Operator<br>Vantage Energy Uinta LLC  |                         |  |             | 9. API Well No.<br>43-013-32942                |              |                           |
| 3a. Address  |                         | 3b. Phone No. (include area c                      | ode)        | 10. Field and Pool or E                        | xplorat      | ory Area                  |
| 116 Inverness Dr East #107, Englewood, CO 8  | 0112                    | (303) 386-8600                                     |             | Wildcat  |              |                           |
| 4. Location of Well (Footage, Sec., T., 579 FNL & 669 FWL (NWNW) Sec 2-T7S-R5W 39.907675LAT 110.422119 I |                         | 1)   |             | 11. Country or Parish, S<br>Duchesne County, U |              |                           |
| 12. CHE  | CK THE APPROPRIATE BO   | OX(ES) TO INDICATE NATUR                           | RE OF NOTIO | CE, REPORT OR OTHE                             | R DAT        | ΓΑ                        |
| TYPE OF SUBMISSION   |                         | T  | YPE OF ACT  | ION  |              |                           |
| Notice of Intent   | Acidize                 | Deepen Deepen                                      | Prod        | uction (Start/Resume)                          |              | Water Shut-Off            |
| 110000 01 111011   | Alter Casing            | Fracture Treat                                     | Recl        | amation  |              | Well Integrity            |
| Subsequent Report Casing Repair  |                         | New Construction Reco                              |             | mplete   | $\checkmark$ | Other Completion Activity |
| <u>.                                    </u>   | Change Plans            | Plug and Abandon Ten                               |             | porarily Abandon                               |              |                           |
| Final Abandonment Notice   | Convert to Injection    | Plug Back  | Wate        | er Disposal                                    |              |                           |
| 13. Describe Proposed or Completed C<br>the proposal is to deepen direction                              |                         |  |             |  |              |                           |

Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has

Enclosed is the Weekly Completion Activity Report from 12/08/08 to 12/15/08.

Well completion activity suspended due to stipulations.

determined that the site is ready for final inspection.)

RECEIVED DEC 2 2 2003

DIV. OF OIL, GAS & MINING

| 14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)   | · · · · · · · · · · · · · · · · · · · |          |   |
|---|---------------------------------------|----------|---|
| Mark Rothenberg   | itle Senior Engineer                  |          | • |
| Signature Med House   | Date 12/16/08                         |          |   |
| AHIS SPACE FOR FEDER  | AL OR STATE OF                        | FICE USE |   |
| Approved by   |                                       |          |   |
|   | Title                                 | Date     |   |
| Conditions of approval, if any, are attached. Approval of this notice does not warrant or cert that the applicant holds legal or equitable title to those rights in the subject lease which woul entitle the applicant to conduct operations thereon. |                                       |          |   |
|   |                                       | 4        |   |

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Nutters Canyon 1-2 API: 43-013-32942

12/8/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 8.9, Tbr in 24 hrs= 211.9, Csg open, C02 at 0500hrs=

26%

12/9/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 9.3, Tbr in 24 hrs= 223.1, Csg open to tank, Fluid samples contain Frac fluid, pH= 7, Sal= 2,900 ppm, TBR/ Pumped= 4781, Load to recover= 6,005

bbl

12/10/2008 Safety Meeting, Review JSA

Production Testing, 24 hrs avg fluid prod= 8.7, Tbr in 24 hrs= 208.3, Csg closed, f/ gas samples

fluid, pH= 7, Sal= 2,900 ppm, TBR/ 4989

12/11/2008 Safety Meeting, Review JSA w/ all Personel

Production Testing, 24 hrs avg fluid prod= 8.8, Tbr in 24 hrs= 212.8, Csg closed, SICP= 150 psi,

Obtain gas samples every 12 hrs, Fluid sample contain frac fluid w/ a trace of solids, PH= 7, Sal

2800 ppm, TBR 5,202

12/12/2008 Safety Meeting, Review JSA

Fluid Rovered last 24 hr= 203 bbl, Avg b/h= 8.5

Cum Fluid recovered= 5404 bbl, Total load to recover= 6005 bbl, Bbls left to recover= 601

Note: Csg on a 12/64 chk maintaining 10 psi in order to gather quality gas samples f/ lab testing at

Precision

Obtain Gas and Fluid samples f/ Precision and Halliburton

12/13/2008 Safety Meeting, Review JSA

Prod Test, Total Fluid Recovered= 5220 bbl, Total Load to Recover= 6005 bbl

SHDN Weatherford Pumping unit at 0930 hrs, RU Hot oil unit and pump 4 bbl Diesel down Csg, Csg on Vacuum, RD and load out Pumping Unit, Bleed off Tbg Unseat pump, Pump 4 bbl Diesel Down Tbg, Reseat pump and clamp off, Install tapped bulplugs and needle valves in Csg and Tbg,

RDMO Opsco Testing equip.

Haul out 3 loads Prod water, Heat and load out tank w/ oil on top from Foam job, Move out 2-500

bbl flow back tanks

Ops Shdn til AM

12/14/2008 Safety Meeting, Review JSA

Move out Oil Tank and remaining Prod tank, Clean Loc

OPS SHDN til am

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DEC 2 2 2008

12/15/2008 Safety Meeting, Review JSA

RDMO Office Trailer, Gen and Deisel Tanks, Blade Location

Ops SHDN

DIV. OF OIL, GAS & MINING

CONFIDENTIAL

Form 3160-3 (August 2007)

### UNITED STATES RECEIVED DEPARTMENT OF THE INTERIOR FIELD OFFIC BUREAU OF LAND MANAGEMENT

FORM APPROVED

|  | OND NO. 1004-013    | ) ( |
|--|---------------------|-----|
|  | Expires July 31, 20 | 11  |
|  |                     | _   |

| 5        | 5. Lease Serial No.  |  |
|----------|--|--|
|          | UTU78242   |  |
| 2        | 6. If Indian, Allottee or Tribe Name                                   |  |
| IR<br>AT | 7. If Unit or CA Agreement, Name and No.<br>Ashley Forest Federal Unit |  |
|          |  |  |

APPLICATION FOR PERMIT TO DRILL OF REENTER DEPT OF THE INTERIOR XDRILL REENTER 1a. Type of work: Lease Name and Well No. 1-2 1b. Type of Well Oil Well X Gas Well X Single Zone Multiple Zone **Nutters Canvon** Other E-mail: mark.rothenberg@vantageenergy.com 9. API Well No. 2. Name of Operator Contact: Mark Rothenberg 43-013-32942 Vantage Energy Uinta LLC 10. Field and Pool, or Exploratory 116 Inverness Drive East, Suite 107 3b. Phone No. (include area code) 3a. Address 303-386-8600 Wildcat Englewood 4. Location of Well (Report location clearly and in accordance with any State Requirements.\*) 11. Sec., T., R., M., or Blk. and Survey or Area At surface 579' FNL 669' FWL NW /4 NW /4 Sec. 2 T 7S R 5W Long: 110.422119 Lat: 39.907675 ±660' FNL ±1,980' FWL (NE/4 NW/4) Sec. 2 T7S R5W Meridian: U.S.B.&M. At proposed production zone 13. State 12. County or parish 14. Distance in miles and direction from nearest town or post office. UT Location is ±17 miles south of Duchense, Utah. Duchesne 17. Spacing Unit dedicated to this well 15. Distance from proposed location to nearest 16. No. of acres in lease Unit= property or lease line, ft. (Also nearest Drig, unit 2.375.5 Lease= ±579' line, if any) 20. BLM/BIA Bond No. on file Antelope Canyon Federal 1 19. Proposed depth 18. Distance from proposed location\* to nearest well, drilling, completed or applied UTB000288 ±81' 6,229' MD: 6,067' TVD for, on this lease, ft. 23. Estimated duration 22. Approximate date work will start ' 21, Elevations (Show whether DF, KDB, RT, GL, etc.)

24. Attachments

August 15, 2008

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- 1. Well plat certified by a registered surveyor.
- 2. A Drilling Plan.

8,556 'GR

- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- 5. Operator certification.
- 6. Such other site specific information and/or plans as may be required by the BLM.

| 25. Signature                        | Name (Printed/Typed) |              | Date     |         |         |      |
|--------------------------------------|----------------------|--------------|----------|---------|---------|------|
| That bother                          | Mark Rothenberg      | 303-386-6800 | . !      | July 18 | 3, 2008 |      |
| Senior Engineer for: Varitage Energy | Uinta LLC            |              |          |         |         |      |
| Approved by (Signature)              | Name (Printed/Typed) |              | Date     |         |         | 0000 |
| de Januar                            | JERRY KEN            | ceKs         | <u> </u> | SEP     | 03      | 2008 |
| Assistant Field Manager              | Office VERNAL        | FIELD OFFIC  | 70 ST    |         |         |      |

Application approval does not warrant or certify that th thereon. Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false,

fictitious, or fraudulent statements or representations as to any matter within its jurisdiction. (continued on page 2)

\*(Instructions on page 3)

30-45 days drig + completion

NOS 7308 AFMSS# 08PP0 913A Accepted by the Accepted Division Mining FOR RECORD ONLY

RECEIVED

NOTICE OF APPROVAL

SEP 1 0 2008

DIV. OF OIL, GAS & MINING



## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE

VERNAL FIELD OFFICE VERNAL, UT 84078

(435) 781-4400



### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company: Well No:

Vantage Energy Uinta LLC

Location:

NWNW, Sec. 2, T7S, R5W

Nutters Canyon 1-2

Lease No:

UTU-78242

API No:

43-013-32942

Agreement:

**Ashley Forest Unit** 

| Title                             | Name            | Office Phone Number | Cell Phone Number |
|-----------------------------------|-----------------|---------------------|-------------------|
| Petroleum Engineer:               | Matt Baker      | (435) 781-4490      | (435) 828-4470    |
| Petroleum Engineer:               | Michael Lee     | (435) 781-4432      | (435) 828-7875    |
| Petroleum Engineer:               | James Ashley    | (435) 781-4470      | (435) 828-7874    |
| Petroleum Engineer:               | Ryan Angus      | (435) 781-4430      | (435) 828-7368    |
| Supervisory Petroleum Technician: | Jamie Sparger   | (435) 781-4502      | (435) 828-3913    |
| Supervisory NRS:                  | Karl Wright     | (435) 781-4484      | (435) 828-7381    |
| NRS/Enviro Scientist:             | Holly Villa     | (435) 781-4404      | (435) 828-3544    |
| NRS/Enviro Scientist:             | James Hereford  | (435) 781-3412      |                   |
| NRS/Enviro Scientist:             | Chuck Macdonald | (435) 781-4441      | (435) 828-7481    |
| NRS/Enviro Scientist:             | Dan Emmett      | (435) 781-3414      |                   |
| NRS/Enviro Scientist:             | Paul Percival   | (435) 781-4493      |                   |
| NRS/Enviro Scientist:             | Michael Cutler  | (435) 781-3401      | (435) 828-3546    |
| NRS/Enviro Scientist:             | Anna Figueroa   | (435) 781-3407      | (435) 828-3548    |
| NRS/Enviro Scientist:             | Verlyn Pindell  | (435) 781-3402      | (435) 828-3547    |
| NRS/Enviro Scientist:             | Darren Williams | (435) 781-4447      | (435) 828-4029    |
| NRS/Enviro Scientist:             | Nathan Packer   | (435) 781-3405      | (435) 828-3545    |
|                                   |                 | Eav. (435) 781-2420 |                   |

Fax: (435) 781-3420

### A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

### **NOTIFICATION REQUIREMENTS**

| Location Construction (Notify Environmental Scientist)       | - | Forty-Eight (48) hours prior to construction of location and access roads.   |
|--|---|--|
| Location Completion (Notify Environmental Scientist)         | - | Prior to moving on the drilling rig.   |
| Spud Notice<br>(Notify Petroleum Engineer)                   | - | Twenty-Four (24) hours prior to spudding the well.   |
| Casing String & Cementing (Notify Supv. Petroleum Tech.)     | - | Twenty-Four (24) hours prior to running casing and cementing all casing strings.   |
| BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.) | - | Twenty-Four (24) hours prior to initiating pressure tests.   |
| First Production Notice<br>(Notify Petroleum Engineer)       | - | Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days. |

### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

See Attached Forest Service Surface Use Plan of Operations (SUPO) - Conditions of Approval.

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8/28/

### DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

### SITE SPECIFIC DOWNHOLE COAs:

- All 2M BOPE shall met the requirements of Onshore Order #2, including the requirement for ram preventers to be one pipe ram and one blind ram. If 3M BOPE equipment is provided by the drilling contractor, the BOPE equipment shall be tested to 2M BOPE test requirements.
- The top of the production casing cement shall extend a minimum of 200 feet above the surface casing shoe.
- Test surface casing to the greater of .22 psi/ft casing length (77 psi) or 1500 psi.

### Variances Granted:

Air Drilling:

- Properly lubricated and maintained rotating head, variance granted to use a properly maintained and lubricated diverter bowl in place of a rotating head.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 35' from the well bore.
- Automatic igniter or continuous pilot light on the blooie line. Variance granted to not have an
  igniter or continuous pilot light, only drilling to 350' and Uinta is usually not hydrocarbon bearing
  in this area.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressor located 50 feet from the well bore on the opposite side from the blooie line.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.

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- All BOPE components shall be inspected daily and those inspections shall be recorded in the
  daily drilling report. Components shall be operated and tested as required by Onshore Oil &
  Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
  performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
  reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum
   Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

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### **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

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data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office
  Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in
  order that a representative may witness plugging operations. If a well is suspended or
  abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent
  Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual
  plugging of the well bore, showing location of plugs, amount of cement in each, and amount of
  casing left in hole, and the current status of the surface restoration.

## CONDITIONS OF APPROVAL FOR THE SURFACE USE PROGRAM OF THE APPLICATION FOR PERMIT TO DRILL

Company/Operator: Vantage Energy Well Name &Number: Nutters Canyon 1-2

Lease number: UTU-78242 Location: NWNW, Sec. 2, T 7S, R 5W

Surface Ownership: FS Date: 27 August 2008

Date APD Received: July 24, 2008 NOS Received:

The following is a list of conditions of approval, for the proposed well noted above, which are being required by the Ashley National Forest. These conditions are in addition to those listed in the Surface Use Plan of Operations (SUPO) and APD that were submitted for the proposed well.

### Paleontology

 A qualified Paleontologist will monitor construction activities for the proposed well pad and access road. If significant paleontological resources are discovered, construction activities would be halted and the USFS notified. Operations in the area of the discovery would not resume until authorization to proceed has been received from the USFS.

### Vegetation Resources

- To reduce the spread/introduction of noxious and invasive weed species via project-related vehicles and equipment into the Project Area, Vantage and its contractors would power-wash all construction equipment and vehicles prior to the start of construction.
- During the construction phase of the project, Vantage will implement an intensive reclamation and weed control program after each segment of project completion. Vantage will reseed all portions of well pads and the ROW not utilized for the operational phase of the project, as well as any sites within the Project Area determined necessary by the USFS. Reseeding will be accomplished using native plant species indigenous to the Project Area. Post-construction seeding applications will continue until determined successful by the USFS. Weed control will be conducted through an Approved Pesticide Use and Weed Control Plan from the Authorized Officer. Weed monitoring and reclamation measures

will be continued on an annual basis (or as frequently as the Authorized Officer determines) throughout the 30 year life of the project.

### Wildlife Protection

- Prior to any surface disturbing activity between April 30 and August 31, Vantage or their contractor, in coordination with a USFS Biologist, would survey all areas within 0.25 mile of proposed surface disturbance for the presence of raptor nests. If occupied/active raptor nests are found, construction would not occur during the critical nesting season for that species within the species-specific spatial buffer, unless the nest is obscured from visual or noise-related impacts through vegetative or topographic screening. USFS biologists would determine spatial buffers based on site-specific vegetative and topographic features within the vicinity of occupied nests.
- Well pad and road construction, roads upgrading, and drilling operations will not be conducted between November 15 and April 30, to protect elk winter range.

### Access Roads

- Several areas of access roads have environmental resource concerns and will need to be covered with 4-6 inches of road based gravel prior to their use as access routes. Please contact the Forest Archaeologist, Jeffrey Rust (435.781.5156), to flag and show the location of these areas. No widening of the road or water drainage bars will be allowed in these areas.
- Construction or upgrading of roads would not be allowed during muddy or frozen
  conditions. Should mud holes develop, they would be filled in and detours
  around them are not allowed.
- Where road developments cross existing cattle fences, cattle guards will be installed and fences will be repaired to functioning condition.
- As needed, Vantage would apply water to utilized roads to reduce fugitive dust from vehicle traffic. If water application does not adequately reduce fugitive dust, the use of Magnesium Chloride (MgCl) would be considered.
- Road drainage crossings for new or upgraded roads will be designed so they do
  not cause siltation or accumulation of debris in the drainage crossing, and
  drainages will not be blocked by the roadbed.

Soils / Water / Floodplains / Wetlands

- Vegetation and/or structural measures to control erosion will be implemented as soon as possible after initial soil disturbance to prevent erosion of disturbed soils.
- Energy dissipaters such as straw bales and silt fences may be required to prevent excess erosion of soils from disturbed areas into adjacent surface waters or floodplains. These structures would be installed during construction, and would be left in place and maintained for the life of the project or until the disturbed slopes have revegetated and stabilized.

### Reserve Pit or Closed Loop

- All pits containing materials that might be hazardous to wildlife would be covered
  with steel mesh screen or netting to prevent entry by migratory birds, bats, or
  other wildlife species.
- The reserve pit would be lined with 20 mil synthetic reinforced material. The liner would overlay a felt liner pad which would protect the liner from punctures if rock is encountered during excavation.
- Transport the cuttings off-site and off-Forest for disposal at an appropriate and approved disposal facility.
- Bury the cuttings on-site, with at least 3 feet of cover materials, in a constructed pit within the cut portion of the well pad. While not optimal, this would effectively remove the cuttings materials from the surface, and from surface runoff, and minimize potential impacts to other surface resources. The disposal pit must be constructed within the cut (not fill) portion of the well pad to ensure the cuttings are not re-exposed at the surface during final well pad reclamation.
- Return to using reserve pits, as described and analyzed in the original approval for your current drilling operations.

### CONFIDENTIAL

Form 3160-5 (August 2007)

## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

| FORM AP      | PROVED     |
|--------------|------------|
| OMB No. 1    | 004-0137   |
| Expires: Jul | v 31, 2010 |

5. Lease Serial No. UTU-78242

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Her Form 2160.2 (APD) for such proposals

6. If Indian, Allottee or Tribe Name

| abandoned well.   | Use Form 3160-3 (A                        |                       |   |            |   |   |  |  |
|---|---|-----------------------|---|------------|---|---|--|--|
|   | T IN TRIPLICATE – Othe                    | r instructions on pa  | age 2.  |            | 7. If Unit of CA/Agreem Ashley Forest Federa    |   |  |  |
| 1. Type of Well   | []  |                       |   |            | 8. Well Name and No.                            |   |  |  |
| Oil Well Gas V  | /ell Other                                |                       |   |            | Nutters Canyon 1-2                              |   |  |  |
| Name of Operator     Vantage Energy Uinta LLC   |   |                       |   |            | 9. API Well No.<br>43-013-32942                 |   |  |  |
| 3a. Address   |   | 3b. Phone No. (in     | clude area code)  |            | 10. Field and Pool or Ex                        | ploratory Area                            |  |  |
| 116 Inverness Dr East #107, Englewood, CO 8   | 0112                                      | (303) 386-8600        |   |            | Wildcat   |   |  |  |
| 4. Location of Well (Footage, Sec., T., 579' FNL & 669' FWL (NWNW)<br>Sec 2-T7S-R5W 39.907675LAT 110.422119 L                       | R.,M., or Survey Description ON           | 1)                    |   |            | 11. Country or Parish, S<br>Duchesne County, UT |   |  |  |
| 12. CHEC  | CK THE APPROPRIATE BO                     | OX(ES) TO INDICA      | ATE NATURE OF   | NOTIC      | CE, REPORT OR OTHER                             | R DATA                                    |  |  |
| TYPE OF SUBMISSION  |   |                       | ТҮРЕ  | OF ACT     | ION   |   |  |  |
| ✓ Notice of Intent  | Notice of Intent Acidize Alter Casing     |                       |   |            | uction (Start/Resume) amation                   | Water Shut-Off Well Integrity             |  |  |
| Subsequent Report   | Casing Repair                             | New Cor               | struction   | Reco       | mplete  | Other                                     |  |  |
| Subsequent Report   | Change Plans                              | Plug and              | Abandon   | Z Temp     | porarily Abandon                                |   |  |  |
| Final Abandonment Notice  | Convert to Injection                      | Plug Bac              | k   | Wate       | r Disposal                                      |   |  |  |
| The referenced well is being tempor   | rarily abandoned until furt               |                       | ean be made to de control con | val Of T   | 'his<br>V <b>CO</b> P                           | ey sent to operator<br>a: 6.4.2009        |  |  |
| 14. I hereby certify that the foregoing is t  | rue and correct. Name (Printe             | ed Typed)             |   |            |   | <del></del>                               |  |  |
| Mark Rothenberg   | 110                                       | Ti                    | tle Senior Engir  | neer       |   |   |  |  |
| Signature Made H  | rotory                                    | D                     | ate 5/28/6  | 4          |   |   |  |  |
|   | THIS SPACE                                | FOR FEDERA            | AL OR STAT  | E OF       | FICE USE  |   |  |  |
| Approved by   |   |                       | Title   |            | Do  | ata.                                      |  |  |
| Conditions of approval, if any, are attache that the applicant holds legal or equitable entitle the applicant to conduct operations | itle to those rights in the subjethereon. | ect lease which would | Office  |            | Da  |   |  |  |
| Title 18 U.S.C. Section 1001 and Title 43 fictitious or fraudulent statements or representations.                                   |   |                       | n knowingly and w   | illfully t | o make to any department                        | or agency of the United States any false, |  |  |
| (Instructions on page 2)  |   |                       |   |            |   | - <del>V =   Y =   /</del>                |  |  |

Form 3160-4 (April 2004)

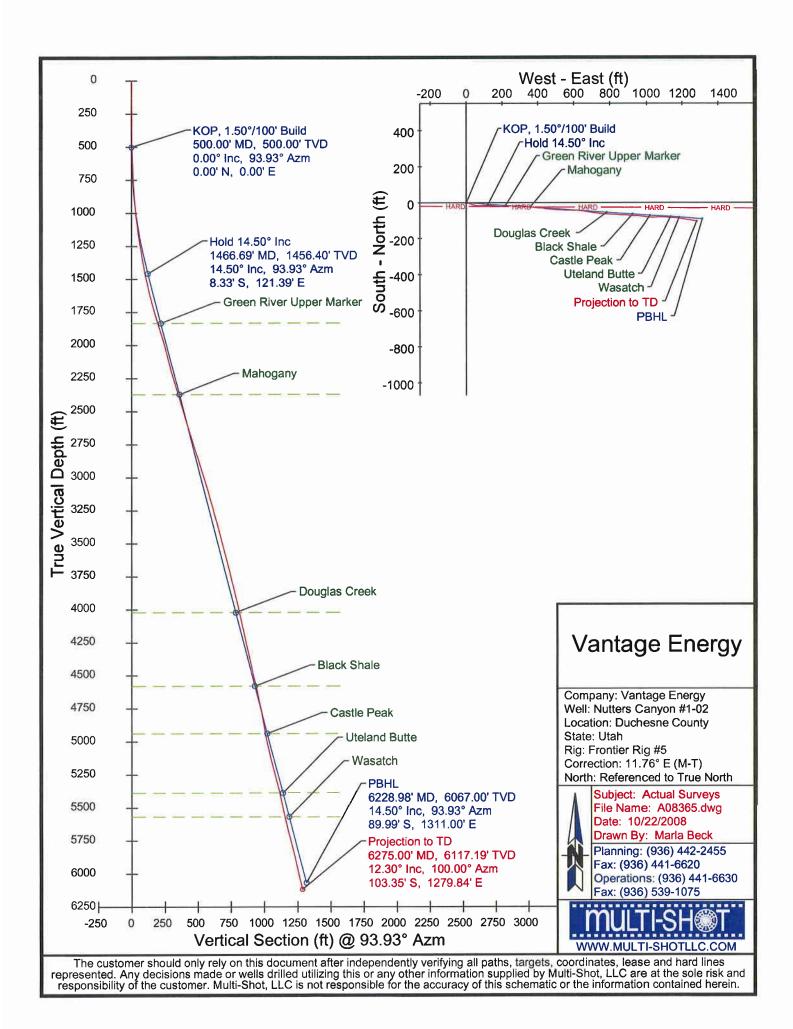
## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

| CONF | FOR M LPHR VED<br>MEN. 0440137<br>EVITE: 1466131, 2007 |
|------|--|
| LOG  |  |

|                          | WEL                        | T C              | OMPLE         | TION          | OR         | RECOMPL                       | ETIO         | N REF                     | POF                | RT AN      | D LO                 | 3         |                                 |               | 5. Léasc<br>UTI | Serial 14.<br>J-78242 |  |             |
|--------------------------|----------------------------|------------------|---------------|---------------|------------|-------------------------------|--------------|---------------------------|--------------------|------------|----------------------|-----------|---------------------------------|---------------|-----------------|-----------------------|--|-------------|
| la. Type o               | of Well<br>of Completi     |                  |               | Gas Vew Wel   |            | Dry Dry Work Over             | Other Dee    | pen [                     | Piu                | ıg Back    |                      | iff. I    | Resvr, .                        | (             |                 |                       | or Tribe Name                                |             |
| ••                       | •                          |                  | Othe          | r             |            |                               |              |                           | _                  |            |                      |           |                                 | 7             |                 | •                     | ement Name and N                             | 0.          |
| 2. Name                  | of Operato                 | r Va             | ntage En      | ergy Ui       | nta LL     | C                             |              |                           |                    |            |                      |           |                                 | .8            |                 | Name and              | UTU-86335X<br>Well No.                       |             |
|                          |                            |                  |               |               |            |                               |              | 20                        | Dho                | na No      | (include             | ara       | a oodal                         | - 0           | Nut             | ters Canyo<br>Vell No | on 1-2                                       |             |
| 3. Addre                 | 88 116 In                  | verne            | ess Dr. Ea    | st #107,      | Engle      | wood, CO 80                   | 112          | Ja                        |                    | 3-386-     |                      | urec      | i couej                         |               | 43-0            | 13-32942              |  |             |
| 4. Locati                | on of Well                 | (Repo            | rt location   | clearly a     | ind in a   | ccordance with                | Feder        | al requir                 | emen               | ts)*       |                      |           |                                 | 10            |                 |                       | Exploratory                                  |             |
| At sur                   | face 5                     | 79' FI           | NL & 669      | ' FWL         | (NWN       | W)                            |              |                           |                    |            |                      |           |                                 |               | Wild            |                       | DI 1 1                                       | _           |
| At top                   |                            |                  |               |               | `          | & 1602' FWL                   | (NEN         | W)                        |                    |            |                      |           |                                 |               | Surve           | y or Area S           | n Block and<br>Sec 2-T7S-R5W                 |             |
| At tota                  | al depth                   | 682' F           | NL & 19       | 49' FW        | L (NE      | (WV                           | i            | 100                       | - 10               | - A . L.   |                      |           |                                 | 12            | . Coun  Duch    | ty or Parish          | 13. State<br>UT                              |             |
| 14. Date S               |                            |                  |               | Date T.       |            | ched P                        |              | 16. D                     | ate C              | omplete    | <u>و دن</u><br>ط     |           |                                 | 17            |                 |                       | RKB, RT, GL)*                                |             |
| 09/19                    | 2/2008                     |                  |               | 10/19         | 2/2008     |                               |              |                           | D &                | z A        | <b>√</b> Rea         | dy to     | Prod.                           |               | G.L.            | = 8566 K.             | B. = 8580                                    |             |
| 18. Total                |                            | iD 62            |               |               | 19.        | Plug Back T.D.                |              |                           |                    |            | 20. <u>[</u>         | epth      | Bridge                          | e Plug Set    |                 |                       |  |             |
|                          |                            | VD <sub>k6</sub> |               |               |            |                               |              | 59                        | 15                 |            |                      | _         |                                 |               | TV              |                       |  |             |
|                          |                            |                  |               |               |            | ubmit copy of<br>sated Z-Dens |              | amma F                    | Ray                |            | v                    | Vas I     | well con<br>OST rui<br>tional S |               | No No No        | Yes (Subi             | mit analysis)<br>mit report)<br>Submit copy) |             |
| 23. Casin                | g and Line                 | er Rec           | ord (Rep      | ort all s     | trings     | set in well)                  | 104          | - 0                       |                    |            | 0.51                 |           |                                 |               |                 |                       |  |             |
| Hole Size                | Size/Gra                   | de               | Wt. (#/ft.)   | Тор           | (MD)       | Bottom (MI                    | D) Sta       | ge Ceme<br>Depth          | enter              |            | of Sks. &<br>of Ceme |           | Slurr<br>(B                     | y Vol.<br>BL) | Cemen           | t Top*                | Amount Pulled                                |             |
| 12-1/4'                  | 8-5/8K                     | (55              | 24#           | 0             |            | 365                           |              |                           |                    | 260 C      |                      | $\Box$    | 20                              |               | Surfa           |                       |  |             |
| 7-7/8"                   | 5-1/2J                     | 55               | 17#           | 0             |            | 6224                          | <u> </u>     |                           |                    | _570 F     | <u>PL II</u>         | $\dashv$  | 144                             |               | Surfa           | ce                    |  |             |
|                          | -                          | $\dashv$         |               | +             |            | -                             |              |                           |                    |            |                      | $\dashv$  |                                 |               |                 |                       |  | <del></del> |
|                          |                            |                  |               |               |            |                               |              |                           |                    |            |                      | 7         |                                 |               |                 |                       |  |             |
|                          |                            |                  |               |               |            |                               |              |                           |                    |            |                      |           |                                 |               |                 |                       |  |             |
| 24. Tubin                | <u> </u>                   | 0.40             | (D) D 1       | D 4           | (1 (12))   | <u> </u>                      | In.          |                           | (ID)               | Dl         | D4. ()               | (D)       | Γ                               | 0'            | Dant            | Cat (MD)              | Dagleon Douth (A)                            | (12)        |
| Size 2-7/8"              | Depth 5850'                | Set (N           | MD) Pack      | er Depth      | (MD)       | Size                          | De           | pth Set (N                | VID)               | Packer     | Depui (i             | VID)      |                                 | Size          | Бери            | Set (MD)              | Packer Depth (M                              | <u></u>     |
|                          | ing Interva                | ıls              |               |               |            |                               | 26           | . Perfo                   | ration             | Record     | <u> </u>             |           |                                 |               |                 |                       |  |             |
|                          | Formation                  | 1                |               | То            | p          | Bottom                        |              | Perfor                    | ated 1             | nterval    |                      |           | Size                            | No. I         | Ioles           | <del> </del> -        | erf. Status                                  |             |
|                          | k Shale                    |                  |               | 4718          |            | 5060                          |              | 62-5712                   |                    | _          |                      | .35       | -                               | 44            |                 | OPEN                  |  |             |
|                          | le Peak<br>and Butte       |                  |               | 5060<br>5559  |            | 5559<br>5739                  |              | <u>81-5523</u><br>86-5110 |                    | _          |                      | .35       |                                 | 36            |                 | OPEN<br>OPEN          |  |             |
|                          | STL                        |                  |               | 3339          |            | 3137                          |              | 52-4912                   |                    | -          |                      | .35       |                                 | 20            |                 | OPEN                  |  |             |
| <u> </u>                 | Fracture, Tr               | eatmer           | nt, Cement    | Squeeze       | , etc.     |                               | 1 7/         | 32-4712                   |                    |            |                      | 100       |                                 | 20            | _               | OLEK                  |  |             |
| I                        | Depth Interv               | /al              |               |               |            |                               |              |                           |                    |            | nd Type              |           | /aterial                        |               |                 | * RI                  |  |             |
| 5562-57                  |                            |                  |               |               |            | re Gel 3LT w                  |              |                           | <u> </u>           |            |                      |           |                                 |               |                 | <u>.</u> Ri           | ECEIVE                                       | U           |
| 5381-55<br>4986-51       |                            | •                |               |               |            | re Gel 3LT w<br>lickwater FR  |              |                           |                    |            |                      | (I        |                                 |               |                 | i.                    | IAL O O cos                                  |             |
| 4752-49                  |                            |                  |               | · · ·         |            | re Gel 3LT w                  |              |                           |                    |            |                      | d         | -                               |               |                 | J(                    | JN 0 2 200                                   | 19-         |
|                          | ction - Inte               | rval A           |               |               |            |                               | **           |                           |                    |            |                      |           |                                 |               |                 | DIV OF                | OII 040-0-14                                 | *****       |
| Date First<br>Produced   | Test<br>Date               | Hours<br>Teste   |               | ection   C    | Oil<br>BBL | Gas<br>MCF                    | Water<br>BBL | O<br>C                    | il Grav<br>orr. Al | rity<br>PI | Gas<br>Gra           | ;<br>vity | 1                               | Production    | Method          | DIV. OF               | OIL, GAS & M                                 | ININ        |
| 11/15/2008               | 11/15/2008                 | 24               |               | <b>&gt;</b> 0 |            | 0                             | 200          |                           |                    |            |                      |           |                                 | Flowing       |                 |                       |  |             |
| Choke<br>Size            | Tbg. Press.<br>Flwg.       | Csg.<br>Press    | 24 Hi<br>Rate | "lr           | Oil<br>BBL | Gas<br>MCF                    | Water<br>BBL |                           | as/Oil<br>atio     |            | Well                 | Statu     | IS                              | <b>7</b> 0.4  |                 |                       |  |             |
|                          | SI                         |                  | - Itule       |               |            | 0                             | 200          |                           |                    |            |                      |           |                                 | TA            |                 |                       |  |             |
| 28a. Produ<br>Date First | Test Inte                  | erval B<br>Hours |               | 17            | Dil        | Gas                           | Water        | 10:                       | il Grav            | itu        | Gas                  |           | - Tr                            | Production    | Mathed          |                       |  |             |
| Produced                 | Date                       | Teste            |               |               | BBL        |                               | BBL          | C                         | orr. AP            | II<br>I    | Gravi                | ty        |                                 | roduction .   | iviciii00       |                       |  |             |
| Choke<br>Size            | Tbg. Press.<br>Flwg.<br>SI | Csg.<br>Press.   | 24 Hr<br>Rate | E             | oil<br>BBL | Gas<br>MCF                    | Water<br>BBL |                           | as/Oil<br>atio     |            | Well                 | Status    | s                               |               |                 |                       |  |             |

<sup>\*(</sup>See instructions and spaces for additional data on page 2)

| 28b. Produ    | ction - Inte         | rval C         |                |              |               |                | ·                      |                     | <del></del>                      |                             |  |  |
|---------------|----------------------|----------------|----------------|--------------|---------------|----------------|------------------------|---------------------|----------------------------------|-----------------------------|--|--|
| Date First    | Test                 | Hours          | Test           | Oil          | Gas           | Water          | Oil Gravity            | Gas                 |                                  |                             |  |  |
| Produced      | Date                 | Tested         | Production     | BBL          | MCF           | BBL            | Corr. API              | Gravity             |                                  |                             |  |  |
| Choke         | Tbg. Press.          | Csg.           | 24 Hr.         | Oil          | Gas           | Water          | Gas/Oil                | Well Status         |                                  |                             |  |  |
| Size          | Flwg.                | Press.         | Rate           | Oil<br>BBL   | MCF           | BBL            | Ratio                  |                     |                                  |                             |  |  |
| 20 P 1        | SI                   |                | <b>→</b>       |              | -             | <u> </u>       |                        | <del>- </del> -     |                                  | <del></del>                 |  |  |
| Date First    | uction - Inte        | Hours          | Test           | Oil          | Gas           | Water          | Oil Gravity            | Gas                 | Production Method                | <del></del>                 |  |  |
| Produced      | Date                 | Tested         | Production     | BBL          | MCF           | BBL            | Corr. API              | Gravity             | Trouvelor Method                 |                             |  |  |
|               |                      |                | ->             |              |               |                | 0.101                  |                     |                                  |                             |  |  |
| Choke<br>Size | Tbg. Press.<br>Flwg. | Csg.<br>Press. | 24 Hr.<br>Rate | Oil<br>BBL   | Gas<br>MCF    | Water<br>BBL   | Gas/Oil<br>Ratio       | Well Status         |                                  |                             |  |  |
| SIZ.          | SI SI                | 11000          |                |              | 11101         |                |                        |                     |                                  |                             |  |  |
| 29. Disp      | osition of C         | Gas (Sold,     | used for fuel, | vented, et   | c.)           |                |                        |                     |                                  |                             |  |  |
| N/A           |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
| 30. Sum       | mary of Por          | rous Zones     | (Include Aq    | uifers):     | · · · · ·     |                | <del></del>            | 31. Formati         | ion (Log) Markers                |                             |  |  |
| Show          | v all import         | tant zones     | of porosity    | and conter   | its thereof:  | Cored interv   | als and all drill-stem | ,                   | . ( . 2)                         |                             |  |  |
| tests,        | including of         | depth inter    | val tested, cu | shion used   | , time tool o | pen, flowing   | and shut-in pressures  | 3                   |                                  |                             |  |  |
| and r         | ecoveries.           |                |                |              |               |                |                        |                     |                                  |                             |  |  |
| Forn          | nation               | Тор            | Bottom         |              | Desc          | riptions, Cont | tents, etc.            |                     | Name                             | Top                         |  |  |
|               | ilation .            |                | -              |              |               | <u> </u>       |                        |                     |                                  | Meas. Depth                 |  |  |
|               |                      |                |                |              |               |                |                        | Green R             |                                  | 1314                        |  |  |
|               |                      | 1              |                |              |               |                |                        | Mahoga<br>Douglas   |                                  | 2374<br>4117                |  |  |
|               |                      |                |                |              |               |                |                        | Black SI            | nale                             | 4718                        |  |  |
|               |                      |                |                |              |               |                |                        | Castle P<br>Uteland |                                  | 5060<br>5559                |  |  |
|               |                      |                |                |              |               |                |                        | Wasatch             | 1                                | 5731                        |  |  |
|               |                      |                | 1              | Ì            |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      | ļ              |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      | L              |                |              |               |                |                        | l.                  |                                  |                             |  |  |
| 32. Addit     | tional remai         | rks (includ    | e plugging p   | rocedure):   |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      |                |                |              |               |                |                        |                     |                                  |                             |  |  |
|               |                      | · .            |                |              |               |                | . 1                    |                     |                                  |                             |  |  |
|               |                      |                |                |              |               | the appropri   |                        |                     |                                  |                             |  |  |
|               |                      |                | ogs (1 full se |              |               | eologic Repo   | _                      | Direction           | nal Survey                       |                             |  |  |
| ∐ Su          | indry Notice         | e for plugg    | ing and cem    | ent verifica | ition [] C    | ore Analysis   | Other:                 |                     |                                  |                             |  |  |
| 24 11.        | hu oo ee e           | hot the f      |                | ttoohed!f    | ormation is   | omplete as 1   | correct as determine   | d from all avails   | ble records (see attached instru | ections\*                   |  |  |
| 34. I nere    | by certify t         | nai the Ior    | egoing and a   | nached inf   | ormation is ( | ompiete and    | correct as ucternine   | u itoiti ali avalla | ore records (see anached histri  | icuons,                     |  |  |
|               |                      |                | –              | _            |               |                | Seni                   | ior Engineer        |                                  |                             |  |  |
| Name          | (please pri          | nt) N          | lark Rother    | nberg        | 1             |                | Title                  |                     |                                  |                             |  |  |
|               | ( )                  | A              |                |              | #             | •              | 1                      | 1.4/00              |                                  |                             |  |  |
| Signa         | ture //              | lea            | / Ka           | er           | <u>/ )</u>    |                | Date <u>51</u>         | 48/07               |                                  |                             |  |  |
| 701- 10 t     | 1000                 | 1001           | d.mud 40 t     |              | tion 1212     | nolza it ai    | a for any narray land  | wingly and will     | Ifully to make to any density    | ant or agency of the United |  |  |
| States any    | false, fict          | itious or f    | raudulent st   | atements of  | or represent  | ations as to a | any matter within its  | s jurisdiction.     | Ifully to make to any department | ent of agency of the Office |  |  |



Job Number: P08-365

Company: Vantage Energy

Lease/Well: Nutters Canyon #1-02

**Location: Duchesne County** 

Rig Name: Frontier Rig #5

G.L. or M.S.L.: 8556'

RKB: 12'

State/Country: Utah

Declination: 11.76° E (M-T)

Grid: Referenced to True North

File name: F:\WELLPL~1\2008\P08360'S\P08365\08365.SVY

Date/Time: 22-Oct-08 / 15:43 Curve Name: Prop Rev 0

WINSERVE PROPOSAL REPORT Minimum Curvature Method Vertical Section Plane 93.93 Vertical Section Referenced to Wellhead Rectangular Coordinates Referenced to Wellhead

| Measured<br>Depth<br>FT              | Incl<br>Angle<br>Deg                         | Drift<br>Direction<br>Deg                 | True<br>Vertical<br>Depth                      | N-S<br>FT                                 | E-W<br>FT  | Vertical<br>Section<br>FT                        | C L O<br>Distance<br>FT                          | S U R E<br>Direction<br>Deg               | Dogleg<br>Severity<br>Deg/100        |
|--------------------------------------|--|---|--|---|--|--|--|---|--------------------------------------|
| KOP, 1.50                            | °/100' Bui                                   | ild                                       |  |   |  |  |  |   |                                      |
| 500.00                               | .00  | 93.93                                     | 500.00   | .00                                       | .00  | .00  | .00  | .00                                       | .00                                  |
| 600.00<br>700.00<br>800.00<br>900.00 | 1.50<br>3.00<br>4.50<br>6.00<br>7.50<br>9.00 | 93.93<br>93.93<br>93.93<br>93.93<br>93.93 | 599.99<br>699.91<br>799.69<br>899.27<br>998.57 | 09<br>36<br>81<br>-1.43<br>-2.24<br>-3.22 | 1.31<br>5.22<br>11.75<br>20.88<br>32.60<br>46.92 | 1.31<br>5.23<br>11.77<br>20.92<br>32.68<br>47.03 | 1.31<br>5.23<br>11.77<br>20.92<br>32.68<br>47.03 | 93.93<br>93.93<br>93.93<br>93.93<br>93.93 | 1.50<br>1.50<br>1.50<br>1.50<br>1.50 |
| 1200.00<br>1300.00<br>1400.00        | 10.50<br>12.00<br>13.50                      | 93.93<br>93.93<br>93.93                   | 1196.09<br>1294.16<br>1391.70                  | -4.38<br>-5.72<br>-7.23                   | 63.81<br>83.27<br>105.29                         | 63.96<br>83.47<br>105.54                         | 63.96<br>83.47<br>105.54                         | 93.93<br>93.93<br>93.93                   | 1.50<br>1.50<br>1.50                 |
| Hold 14.5                            |  |   |  |   | 101.00   | 404.07   | 404.07   | 00.00                                     | 4.50                                 |
| 1466.69                              | 14.50  | 93.93                                     | 1456.40  | -8.33                                     | 121.39   | 121.67   | 121.67   | 93.93                                     | 1.50                                 |
| Green Riv                            | er Upper                                     | Marker                                    |  |   |  |  |  |   |                                      |
| 1854.64                              | 14.50  | 93.93                                     | 1832.00  | -14.98                                    | 218.30   | 218.81   | 218.81   | 93.93                                     | .00                                  |
| Mahogan                              | y  | -   |  |   |  |  |  |   |                                      |
| 2410.35                              | 14.50  | 93.93                                     | 2370.00  | -24.51                                    | 357.11   | 357.95   | 357.95   | 93.93                                     | .00                                  |
| Douglas (                            | Creek  |   |  |   |  |  |  |   |                                      |
| 4116.70                              | 14.50  | 93.93                                     | 4022.00  | -53.77                                    | 783.36   | 785.20   | 785.20   | 93.93                                     | .00                                  |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O :<br>Distance<br>FT | S U R E<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|---------------------------|-----------------------------|-------------------------------|
| Black Sha               | ale                  |                           |                           |           |           |                           |                           |                             |                               |
| 4690.99                 | 14.50                | 93.93                     | 4578.00                   | -63.62    | 926.81    | 928.99                    | 928.99                    | 93.93                       | .00                           |
| Castle Pe               | ak                   |                           | <del></del>               |           |           |                           |                           | ~                           |                               |
| 5061.80                 | 14.50                | 93.93                     | 4937.00                   | -69.98    | 1019.44   | 1021.84                   | 1021.84                   | 93.93                       | .00                           |
| Uteland E               | Butte                |                           |                           |           |           |                           |                           |                             |                               |
| 5526.61                 | 14.50                | 93.93                     | 5387.00                   | -77.95    | 1135.55   | 1138.22                   | 1138.22                   | 93.93                       | .00                           |
| Wasatch                 |                      |                           |                           |           |           |                           |                           |                             |                               |
| 5712.53                 | 14.50                | 93.93                     | 5567.00                   | -81.13    | 1181.99   | 1184.77                   | 1184.77                   | 93.93                       | .00                           |
| PBHL                    |                      |                           |                           |           |           |                           |                           |                             |                               |
| 6228.98                 | 14.50                | 93.93                     | 6067.00                   | -89.99    | 1311.00   | 1314.09                   | 1314.09                   | 93.93                       | .00                           |



Job Number: P08-365

Company: Vantage Energy

Lease/Well: Nutters Canyon #1-02

Location: Duchesne County

Rig Name: Frontier Rig #5

RKB: 12'

G.L. or M.S.L.: 8556'

State/Country: Utah

Declination: 11.76° E (M-T)

**Grid: Referenced to True North** 

File name: F:\WELLPL~1\2008\P08360'S\P08365\08365.SVY

Date/Time: 22-Oct-08 / 15:11

Curve Name: SDTRK #00

# WINSERVE SURVEY CALCULATIONS Minimum Curvature Method Vertical Section Plane 93.93 Vertical Section Referenced to Wellhead Rectangular Coordinates Referenced to Wellhead

| Measured<br>Depth<br>FT | inci<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT    | E-W<br>FT | Vertical<br>Section<br>FT | C L O .<br>Distance<br>FT | S U R E<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|--------------|-----------|---------------------------|---------------------------|-----------------------------|-------------------------------|
|                         |                      |                           |                           |              |           |                           |                           |                             |                               |
| .00                     | .00                  | .00                       | .00                       | .00          | .00       | .00                       | .00                       | .00                         | .00                           |
| 418.00                  | .40                  | 114.30                    | 418.00                    | 60           | 1.33      | 1.37                      | 1.46                      | 114.30                      | .10                           |
| 479.00                  | 1.10                 | 121.80                    | 478.99                    | -1.00        | 2.02      | 2.09                      | 2.25                      | 116.24                      | 1.16                          |
| 541.00                  | 2.20                 | 115.30                    | 540.96                    | -1.82        | 3.60      | 3.72                      | 4.04                      | 116.78                      | 1.80                          |
| 602.00                  | 2.20                 | 125.00                    | 601.92                    | -2.99        | 5.62      | 5.81                      | 6.37                      | 118.02                      | .61                           |
| 000.00                  | 0.00                 | 407.00                    | 660.00                    | 4.00         | 7.69      | 7.95                      | 8.68                      | 117.60                      | 1.07                          |
| 663.00                  | 2.20                 | 107.90                    | 662.88                    | -4.02        |           | 7.95<br>10.61             | 11.18                     | 112.25                      | 2.04                          |
| 724.00                  | 2.90                 | 84.40                     | 723.82                    | <b>-4.23</b> | 10.34     |                           | 14.36                     |                             | 2.0 <del>4</del><br>1.25      |
| 785.00                  | 3.50                 | 92.80                     | 784.72                    | -4.17        | 13.74     | 13.99                     |                           | 106.89                      | 1.23                          |
| 846.00                  | 4.00                 | 101.30                    | 845.59                    | -4.68        | 17.69     | 17.96                     | 18.29                     | 104.82                      |                               |
| 907.00                  | 4.60                 | 108.00                    | 906.42                    | -5.85        | 22.10     | 22.45                     | 22.86                     | 104.83                      | 1.28                          |
| 971.00                  | 5.80                 | 108.10                    | 970.15                    | -7.65        | 27.61     | 28.07                     | 28.65                     | 105.49                      | 1.88                          |
| 1033.00                 | 6.70                 | 111.00                    | 1031.79                   | -9.92        | 33.97     | 34.57                     | 35.39                     | 106.28                      | 1.54                          |
| 1096.00                 | 7.30                 | 105.80                    | 1094.32                   | -12.33       | 41.25     | 42.00                     | 43.05                     | 106.64                      | 1.38                          |
| 1158.00                 | 8.50                 | 99.60                     | 1155.73                   | -14.16       | 49.56     | 50.41                     | 51.54                     | 105.95                      | 2.37                          |
| 1221.00                 | 8.80                 | 97.80                     | 1218.01                   | -15.59       | 58.92     | 59.85                     | 60.95                     | 104.82                      | .64                           |
| 1221.00                 | 0.00                 | 97.00                     | 1210.01                   | -10.00       | 00.02     | 05.00                     | 00.00                     | 104.02                      | .01                           |
| 1284.00                 | 9.40                 | 93.50                     | 1280.22                   | -16.56       | 68.83     | 69.81                     | 70.80                     | 103.53                      | 1.44                          |
| 1347.00                 | 10.00                | 87.00                     | 1342.32                   | -16.59       | 79.43     | 80.38                     | 81.15                     | 101.80                      | 1.98                          |
| 1411.00                 | 10.30                | 90.30                     | 1405.32                   | -16.33       | 90.70     | 91.61                     | 92.16                     | 100.21                      | 1.02                          |
| 1474.00                 | 10.90                | 88.40                     | 1467.24                   | -16.19       | 102.29    | 103.16                    | 103.56                    | 99.00                       | 1.10                          |
| 1536.00                 | 11.60                | 88.00                     | 1528.05                   | -15.81       | 114.38    | 115.19                    | 115.47                    | 97.87                       | 1.14                          |
|                         |                      |                           |                           |              |           |                           |                           |                             |                               |
| 1600.00                 | 13.50                | 92.40                     | 1590.52                   | -15.90       | 128.27    | 129.06                    | 129.26                    | 97.07                       | 3.32                          |
| 1663.00                 | 15.50                | 95.40                     | 1651.51                   | -17.00       | 144.00    | 144.83                    | 145.00                    | 96.73                       | 3.39                          |
| 1725.00                 | 16.10                | 96.10                     | 1711.17                   | -18.69       | 160.80    | 161.70                    | 161.88                    | 96.63                       | 1.02                          |

| Measured<br>Depth<br>FT                             | Incl<br>Angle<br>Deg                      | Drift<br>Direction<br>Deg                 | True<br>Vertical<br>Depth                           | N-S<br>FT                                      | E-W<br>FT                                      | Vertical<br>Section<br>FT                      | CLOS<br>Distance<br>FT                         | S U R E<br>Direction<br>Deg      | Dogleg<br>Severity<br>Deg/100    |
|---|---|---|---|--|--|--|--|----------------------------------|----------------------------------|
| 1788.00   | 15.20                                     | 96.80                                     | 1771.83   | -20.60   | 177.69   | 178.68   | 178.88   | 96.61                            | 1.46                             |
| 1851.00   | 16.80                                     | 90.20                                     | 1832.40   | -21.61   | 195.00   | 196.02   | 196.19   | 96.32                            | 3.84                             |
| 1914.00   | 18.10                                     | 84.80                                     | 1892.50   | -20.75   | 213.85   | 214.77   | 214.85   | 95.54                            | 3.29                             |
| 1977.00   | 16.40                                     | 88.10                                     | 1952.67   | -19.57   | 232.48   | 233.28   | 233.31   | 94.81                            | 3.11                             |
| 2041.00   | 15.10                                     | 88.80                                     | 2014.26   | -19.10   | 249.85   | 250.57   | 250.58   | 94.37                            | 2.05                             |
| 2103.00   | 13.90                                     | 86.00                                     | 2074.29   | -18.41   | 265.35   | 265.99   | 265.99   | 93.97                            | 2.24                             |
| 2167.00   | 14.90                                     | 88.00                                     | 2136.27   | -17.59   | 281.25   | 281.79   | 281.79   | 93.58                            | 1.74                             |
| 2230.00   | 15.30                                     | 93.30                                     | 2197.10   | -17.78   | 297.64   | 298.16   | 298.17   | 93.42                            | 2.28                             |
| 2293.00   | 15.80                                     | 98.30                                     | 2257.80   | -19.50   | 314.43   | 315.02   | 315.03   | 93.55                            | 2.27                             |
| 2357.00   | 17.10                                     | 96.80                                     | 2319.18   | -21.87   | 332.39   | 333.11   | 333.11   | 93.76                            | 2.14                             |
| 2420.00   | 17.20                                     | 95.00                                     | 2379.38   | -23.78   | 350.87   | 351.67   | 351.67   | 93.88                            | .86                              |
| 2484.00   | 16.20                                     | 95.60                                     | 2440.68   | -25.47   | 369.18   | 370.06   | 370.06   | 93.95                            | 1.59                             |
| 2547.00   | 16.50                                     | 98.40                                     | 2501.13   | -27.64   | 386.78   | 387.76   | 387.76   | 94.09                            | 1.34                             |
| 2610.00   | 17.60                                     | 95.60                                     | 2561.36   | -29.88   | 405.11   | 406.20   | 406.21   | 94.22                            | 2.18                             |
| 2673.00   | 17.40                                     | 94.50                                     | 2621.45   | -31.54   | 423.98   | 425.14   | 425.15   | 94.25                            | .61                              |
| 2736.00   | 17.30                                     | 96.40                                     | 2681.58   | -33.33   | 442.68   | 443.92   | 443.93   | 94.31                            | .91                              |
| 2799.00   | 18.00                                     | 96.60                                     | 2741.61   | -35.49   | 461.66   | 463.00   | 463.02   | 94.40                            | 1.12                             |
| 2861.00   | 18.30                                     | 95.30                                     | 2800.53   | -37.49   | 480.86   | 482.30   | 482.32   | 94.46                            | .81                              |
| 2924.00   | 17.90                                     | 93.90                                     | 2860.41   | -39.06   | 500.37   | 501.87   | 501.89   | 94.46                            | .94                              |
| 2986.00   | 17.20                                     | 93.80                                     | 2919.53   | -40.32   | 519.03   | 520.57   | 520.59   | 94.44                            | 1.13                             |
| 3050.00   | 16.70                                     | 90.90                                     | 2980.75   | -41.09   | 537.66   | 539.21   | 539.23   | 94.37                            | 1.53                             |
| 3113.00   | 17.10                                     | 91.50                                     | 3041.03   | -41.47   | 555.97   | 557.51   | 557.52   | 94.27                            | .69                              |
| 3176.00   | 15.90                                     | 91.70                                     | 3101.43   | -41.97   | 573.86   | 575.38   | 575.39   | 94.18                            | 1.91                             |
| 3238.00   | 15.00                                     | 92.00                                     | 3161.19   | -42.50   | 590.37   | 591.89   | 591.89   | 94.12                            | 1.46                             |
| 3301.00   | 15.30                                     | 92.90                                     | 3222.00   | -43.21   | 606.81   | 608.35   | 608.35   | 94.07                            | .61                              |
| 3364.00   | 15.70                                     | 94.80                                     | 3282.71   | -44.34   | 623.61   | 625.18   | 625.18   | 94.07                            | 1.03                             |
| 3428.00   | 15.60                                     | 96.30                                     | 3344.34   | -46.01   | 640.79   | 642.44   | 642.44   | 94.11                            | .65                              |
| 3491.00   | 15.30                                     | 97.80                                     | 3405.06   | -48.07   | 657.45   | 659.20   | 659.20   | 94.18                            | .79                              |
| 3555.00   | 15.00                                     | 97.80                                     | 3466.84   | -50.34   | 674.02   | 675.88   | 675.90   | 94.27                            | .47                              |
| 3618.00   | 14.30                                     | 98.70                                     | 3527.79   | -52.62   | 689.79   | 691.77   | 691.79   | 94.36                            | 1.17                             |
| 3680.00   | 14.30                                     | 99.10                                     | 3587.87   | -54.99   | 704.92   | 707.03   | 707.06   | 94.46                            | .16                              |
| 3743.00   | 14.30                                     | 97.50                                     | 3648.91   | -57.24   | 720.31   | 722.54   | 722.58   | 94.54                            | .63                              |
| 3805.00   | 14.00                                     | 96.00                                     | 3709.03   | -59.02   | 735.36   | 737.68   | 737.73   | 94.59                            | .76                              |
| 3869.00   | 13.50                                     | 95.60                                     | 3771.20   | -60.56   | 750.50   | 752.88   | 752.94   | 94.61                            | .80                              |
| 3932.00   | 13.70                                     | 95.20                                     | 3832.43   | -61.95   | 765.25   | 767.69   | 767.75   | 94.63                            | .35                              |
| 3995.00<br>4059.00<br>4121.00<br>4185.00<br>4248.00 | 13.80<br>12.60<br>12.40<br>12.90<br>13.20 | 94.90<br>94.90<br>92.70<br>91.60<br>92.50 | 3893.63<br>3955.93<br>4016.47<br>4078.91<br>4140.28 | -63.27<br>-64.52<br>-65.41<br>-65.93<br>-66.44 | 780.16<br>794.72<br>808.11<br>822.11<br>836.33 | 782.66<br>797.28<br>810.69<br>824.70<br>838.92 | 782.72<br>797.34<br>810.75<br>824.75<br>838.97 | 94.64<br>94.63<br>94.59<br>94.54 | .19<br>1.87<br>.83<br>.87<br>.58 |
| 4311.00   | 12.70                                     | 94.00                                     | 4201.68   | -67.24   | 850.43   | 853.03   | 853.08   | 94.52                            | .96                              |
| 4375.00   | 12.40                                     | 95.60                                     | 4264.15   | -68.40   | 864.28   | 866.94   | 866.98   | 94.53                            | .72                              |

| Measured<br>Depth<br>FT | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT               | C L O S<br>Distance<br>FT | SURE<br>Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|-------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---|---------------------------|--------------------------|-------------------------------|
| 4438.00                 | 12.70                | 93.10                     | 4325.65                   | -69.44    | 877.93    | 880.62                                  | 880.67                    | 94.52                    | .98                           |
| 4500.00                 | 12.00                | 89.10                     | 4386.21                   | -69.70    | 891.18    | 893.86                                  | 893.90                    | 94.47                    | 1.78                          |
| 4563.00                 | 12.60                | 96.00                     | 4447.77                   | -70.32    | 904.56    | 907.25                                  | 907.29                    | 94.45                    | 2.52                          |
| 4627.00                 | 13.10                | 97.50                     | 4510.17                   | -72.00    | 918.70    | 921.47                                  | 921.51                    | 94.48                    | .94                           |
| 4690.00                 | 13.40                | 93.90                     | 4571.49                   | -73.42    | 933.06    | 935.90                                  | 935.94                    | 94.50                    | 1.39                          |
|                         |                      |                           |                           |           |           |   |                           |                          |                               |
| 4754.00                 | 12.20                | 90.70                     | 4633.90                   | -74.01    | 947.22    | 950.06                                  | 950.11                    | 94.47                    | 2.18                          |
| 4816.00                 | 10.90                | 97.30                     | 4694.65                   | -74.84    | 959.58    | 962.46                                  | 962.50                    | 94.46                    | 2.99                          |
| 4878.00                 | 11.00                | 97.00                     | 4755.52                   | -76.30    | 971.27    | 974.22                                  | 974.26                    | 94.49                    | .19                           |
| 4942.00                 | 10.90                | 98.00                     | 4818.35                   | -77.89    | 983.32    | 986.35                                  | 986.40                    | 94.53                    | .34                           |
| 5004.00                 | 9.20                 | 95.80                     | 4879.40                   | -79.21    | 994.06    | 997.15                                  | 997.21                    | 94.56                    | 2.81                          |
|                         |                      |                           |                           |           |           |   |                           |                          |                               |
| 5066.00                 | 9.80                 | 93.70                     | 4940.55                   | -80.05    | 1004.26   | 1007.38                                 | 1007.44                   | 94.56                    | 1.12                          |
| 5130.00                 | 12.70                | 94.30                     | 5003.31                   | -80.93    | 1016.71   | 1019.87                                 | 1019.93                   | 94.55                    | 4.53                          |
| 5193.00                 | 13.40                | 91.20                     | 5064.69                   | -81.60    | 1030.91   | 1034.08                                 | 1034.14                   | 94.53                    | 1.57                          |
| 5255.00                 | 13.80                | 89.30                     | 5124.95                   | -81.66    | 1045.49   | 1048.63                                 | 1048.67                   | 94.47                    | .97                           |
| 5317.00                 | 14.20                | 87.20                     | 5185.11                   | -81.20    | 1060.48   | 1063.55                                 | 1063.58                   | 94.38                    | 1.04                          |
| 0011100                 | ,                    | •··-•                     |                           |           |           | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |                           |                          |                               |
| 5380.00                 | 14.70                | 88.50                     | 5246.11                   | -80.61    | 1076.19   | 1079.18                                 | 1079.20                   | 94.28                    | .95                           |
| 5444.00                 | 14.20                | 91.70                     | 5308.09                   | -80.63    | 1092.15   | 1095.11                                 | 1095.13                   | 94.22                    | 1.47                          |
| 5506.00                 | 13.10                | 94.00                     | 5368.34                   | -81.35    | 1106.76   | 1109.74                                 | 1109.75                   | 94.20                    | 1.98                          |
| 5568.00                 | 12.00                | 96.60                     | 5428.86                   | -82.58    | 1120.18   | 1123.20                                 | 1123.22                   | 94.22                    | 1.99                          |
| 5631.00                 | 12.30                | 94.10                     | 5490.45                   | -83.81    | 1133.38   | 1136.45                                 | 1136.47                   | 94.23                    | .96                           |
|                         |                      |                           |                           |           |           |   |                           |                          |                               |
| 5694.00                 | 13.10                | 93.80                     | 5551.90                   | -84.76    | 1147.19   | 1150.30                                 | 1150.32                   | 94.23                    | 1.27                          |
| 5756.00                 | 12.60                | 95.30                     | 5612.35                   | -85.85    | 1160.94   | 1164.09                                 | 1164.11                   | 94.23                    | .97                           |
| 5819.00                 | 14.30                | 96.00                     | 5673.62                   | -87.30    | 1175.52   | 1178.74                                 | 1178.76                   | 94.25                    | 2.71                          |
| 5882.00                 | 14.60                | 97.70                     | 5734.63                   | -89.18    | 1191.12   | 1194.44                                 | 1194.46                   | 94.28                    | .82                           |
| 5945.00                 | 14.00                | 97.60                     | 5795.68                   | -91.25    | 1206.55   | 1209.96                                 | 1209.99                   | 94.32                    | .95                           |
|                         |                      |                           |                           |           |           |   |                           |                          |                               |
| 6008.00                 | 13.70                | 98.20                     | 5856.84                   | -93.32    | 1221.48   | 1225.01                                 | 1225.04                   | 94.37                    | .53                           |
| 6070.00                 | 13.00                | 100.20                    | 5917.17                   | -95.60    | 1235.62   | 1239.26                                 | 1239.31                   | 94.42                    | 1.35                          |
| 6134.00                 | 12.80                | 100.10                    | 5979.55                   | -98.12    | 1249.68   | 1253.47                                 | 1253.53                   | 94.49                    | .31                           |
| 6196.00                 | 12.70                | 99.40                     | 6040.02                   | -100.44   | 1263.16   | 1267.08                                 | 1267.15                   | 94.55                    | .30                           |
| 6225.00                 | 12.30                | 100.00                    | 6068.34                   | -101.50   | 1269.35   | 1273.32                                 | 1273.40                   | 94.57                    | 1.45                          |
|                         |                      |                           |                           |           |           |   |                           |                          |                               |
| Projection to TD        |                      |                           |                           |           |           |   |                           |                          |                               |
| 6275.00                 | 12.30                | 100.00                    | 6117.19                   | -103.35   | 1279.84   | 1283.92                                 | 1284.01                   | 94.62                    | .00                           |